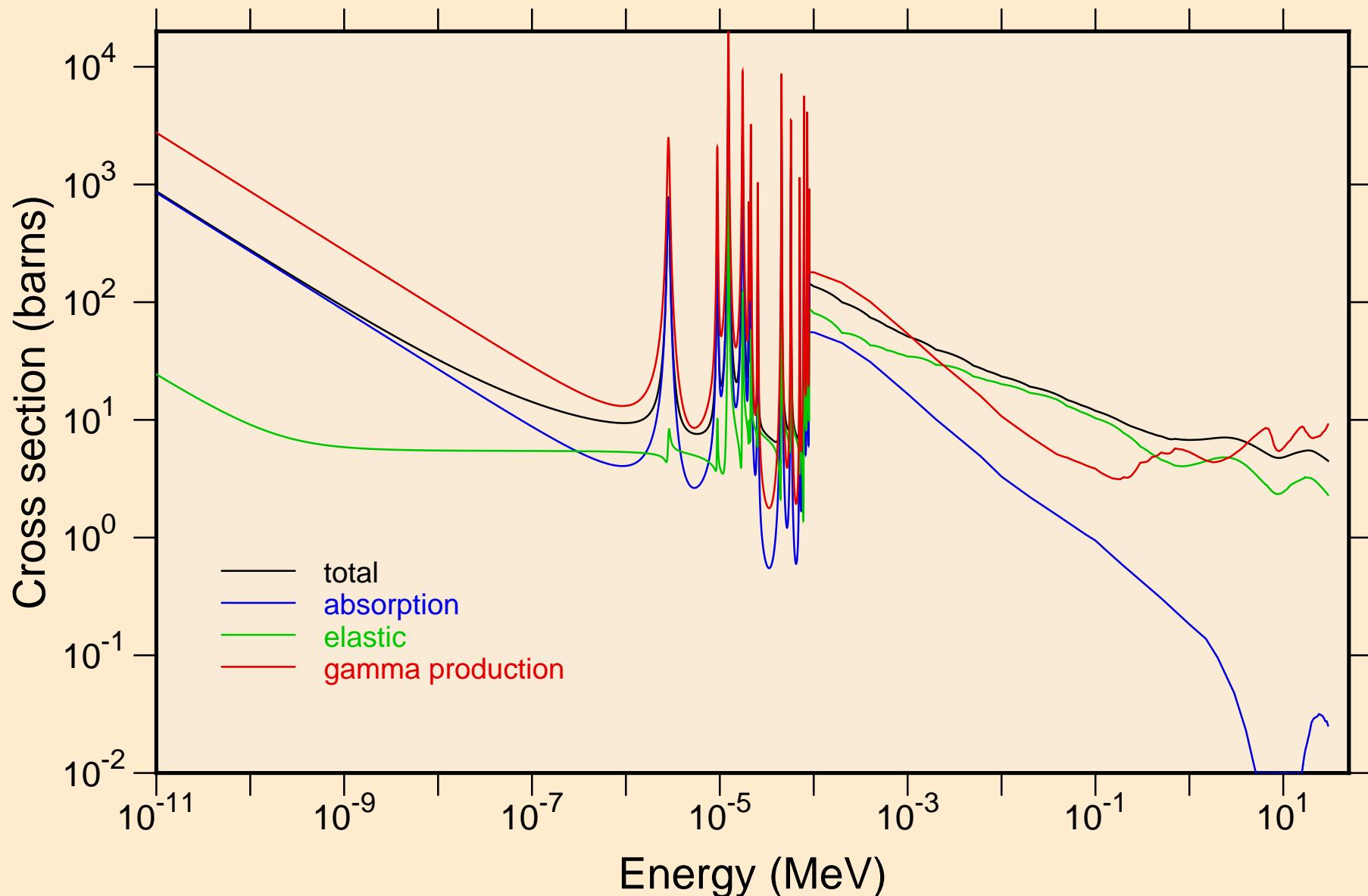


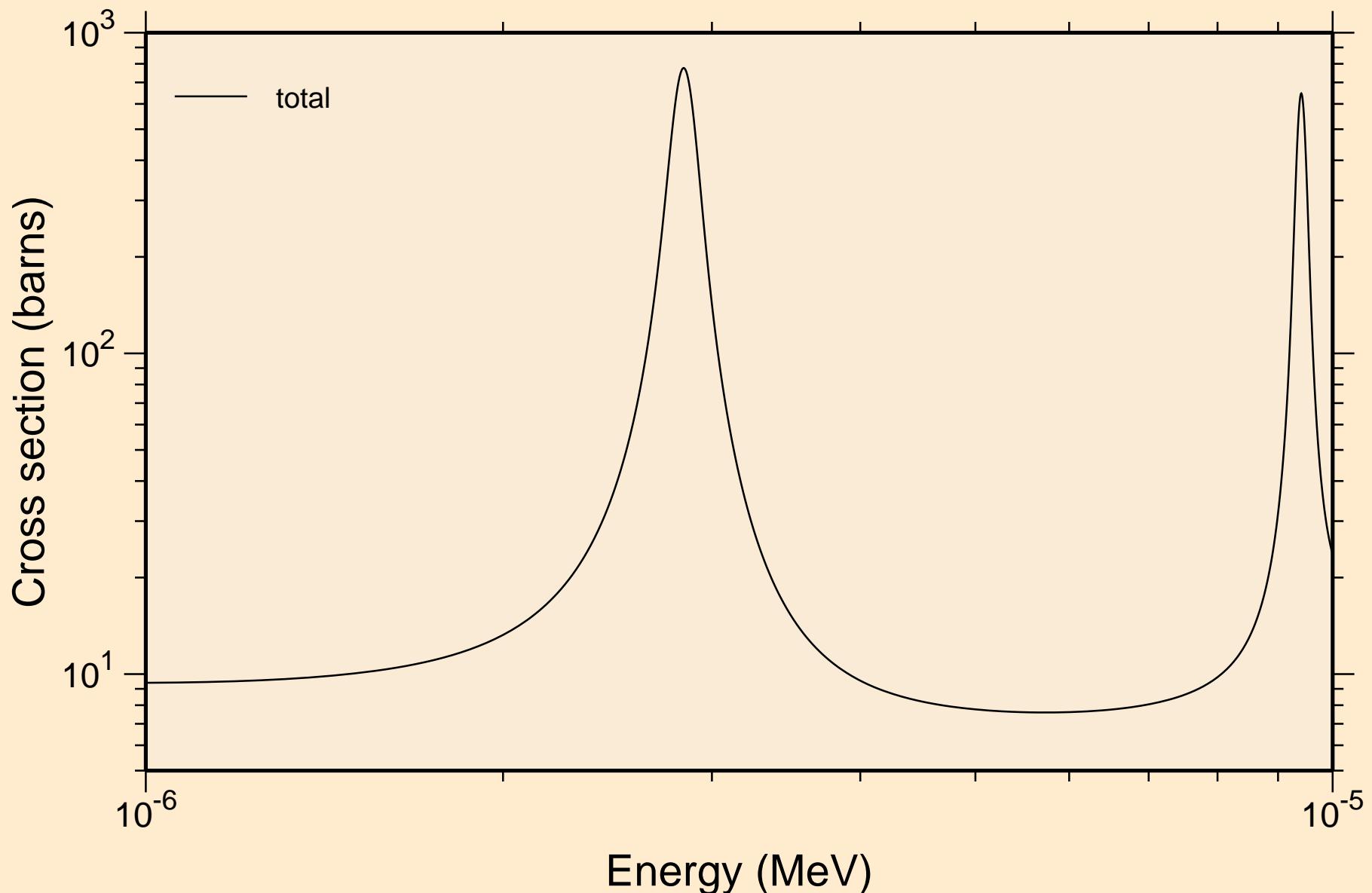
# ADVANCE CALCULATIONS

## Principal cross sections



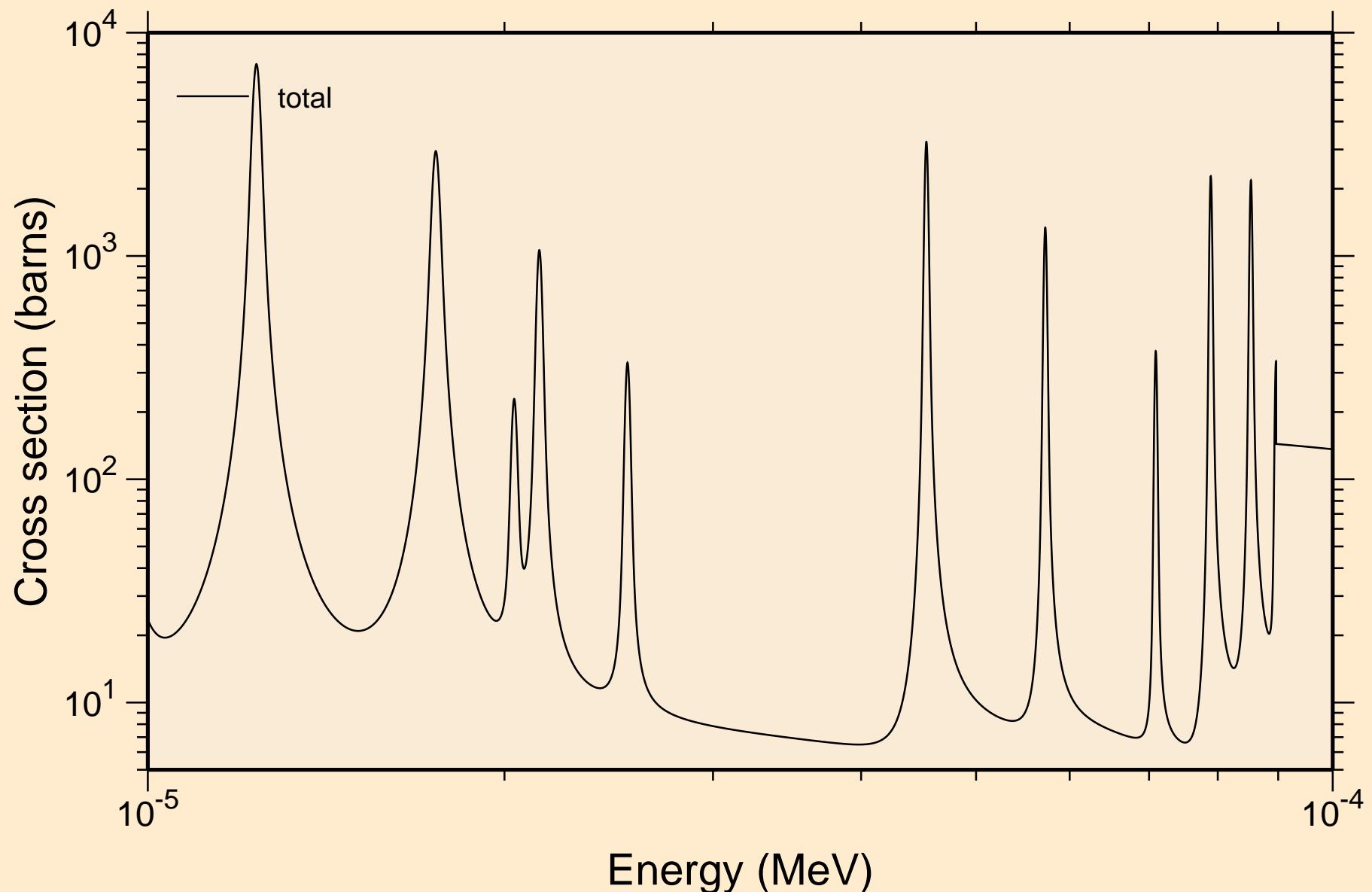
# ADVANCE CALCULATIONS

## resonance total cross section



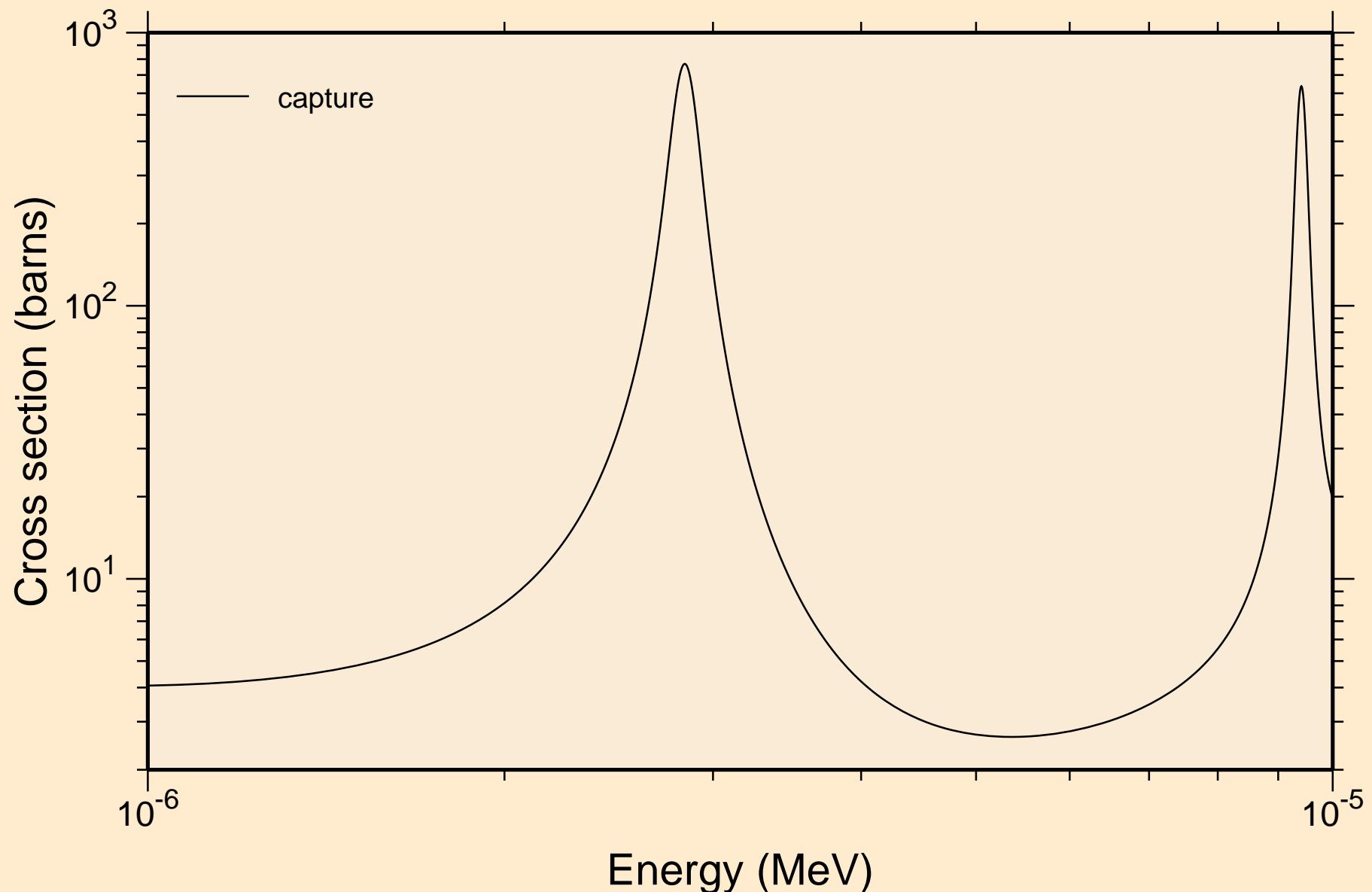
# ADVANCE CALCULATIONS

## resonance total cross section



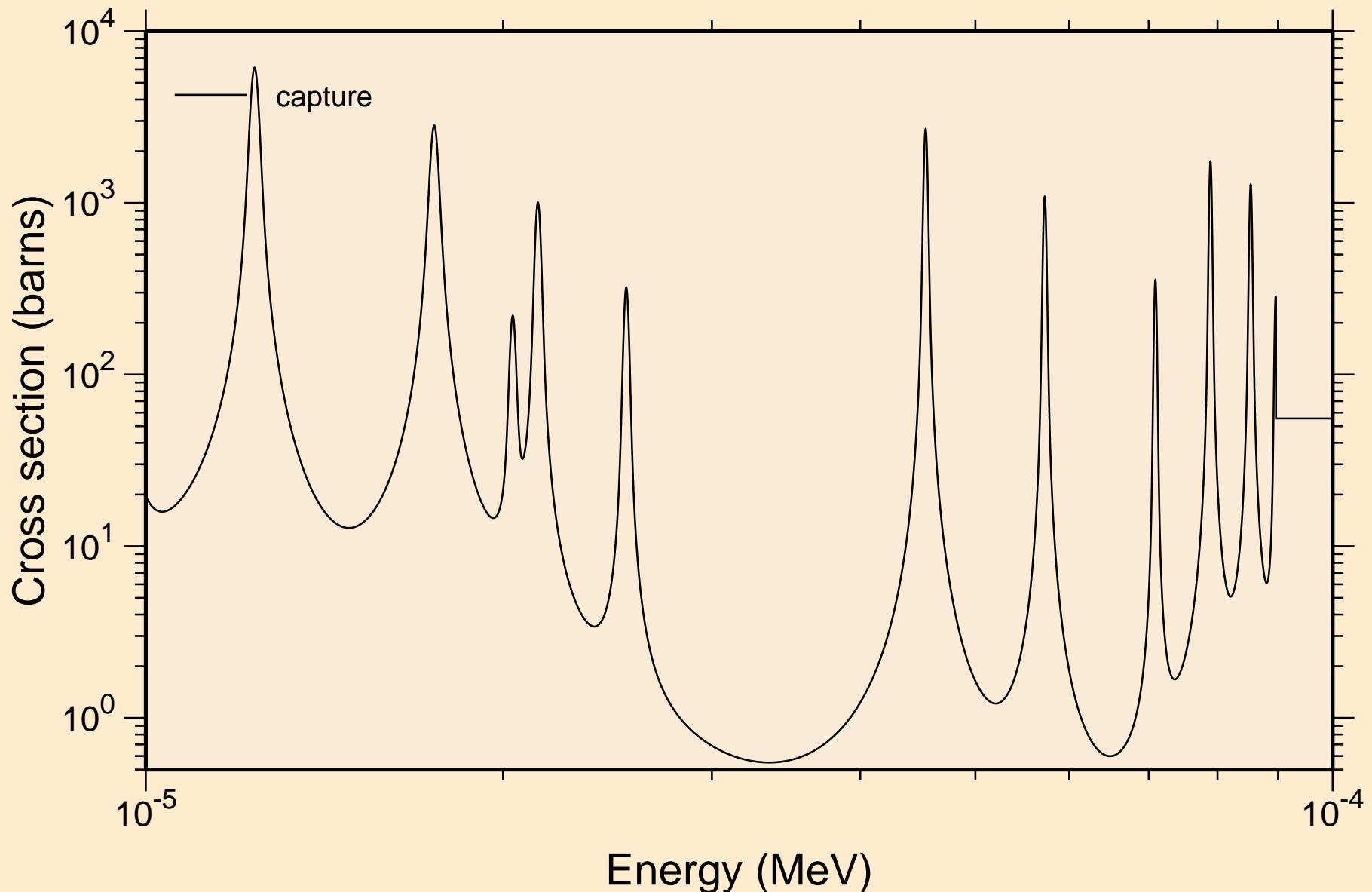
# ADVANCE CALCULATIONS

## resonance absorption cross sections



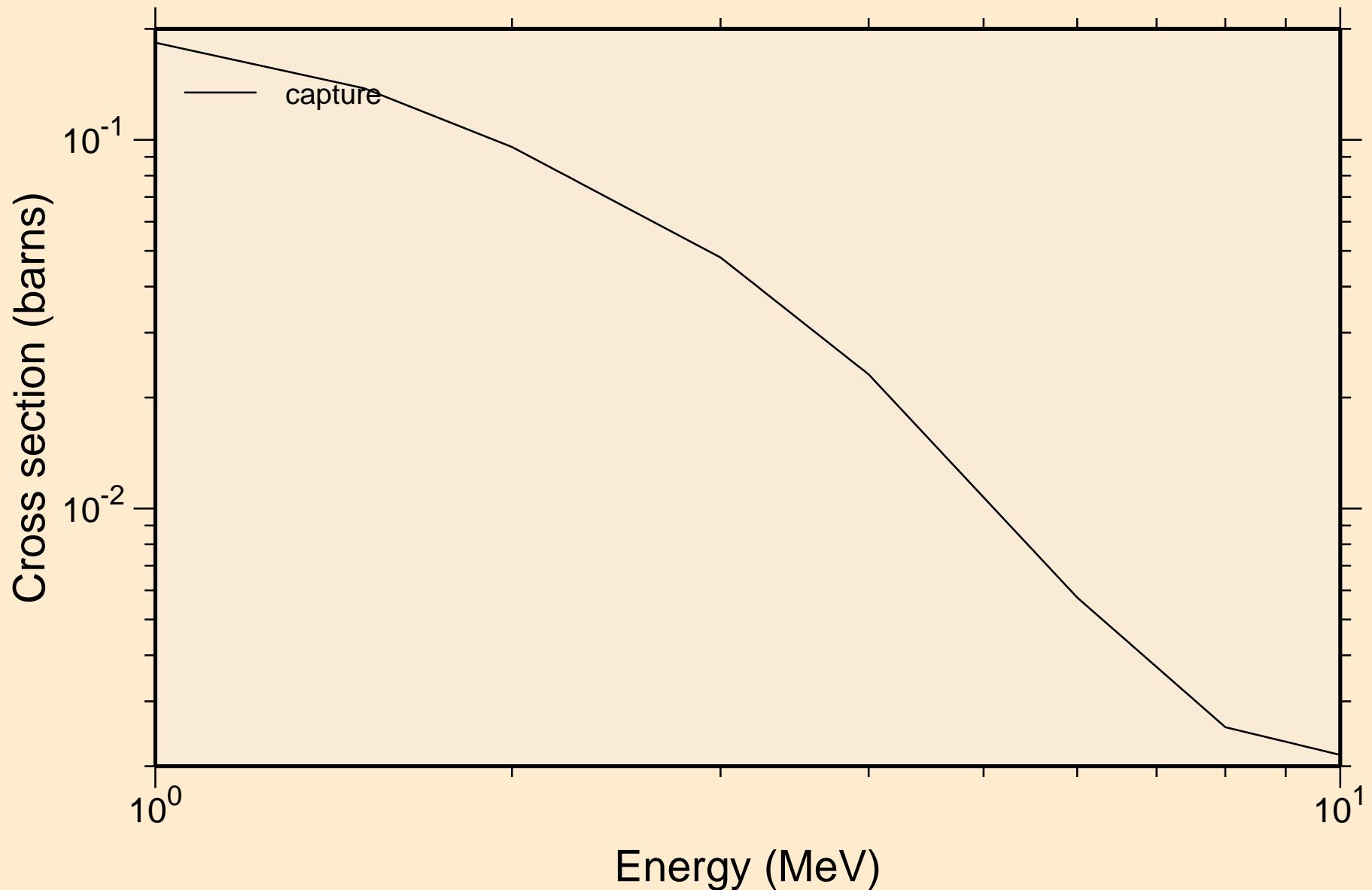
# ADVANCE CALCULATIONS

## resonance absorption cross sections



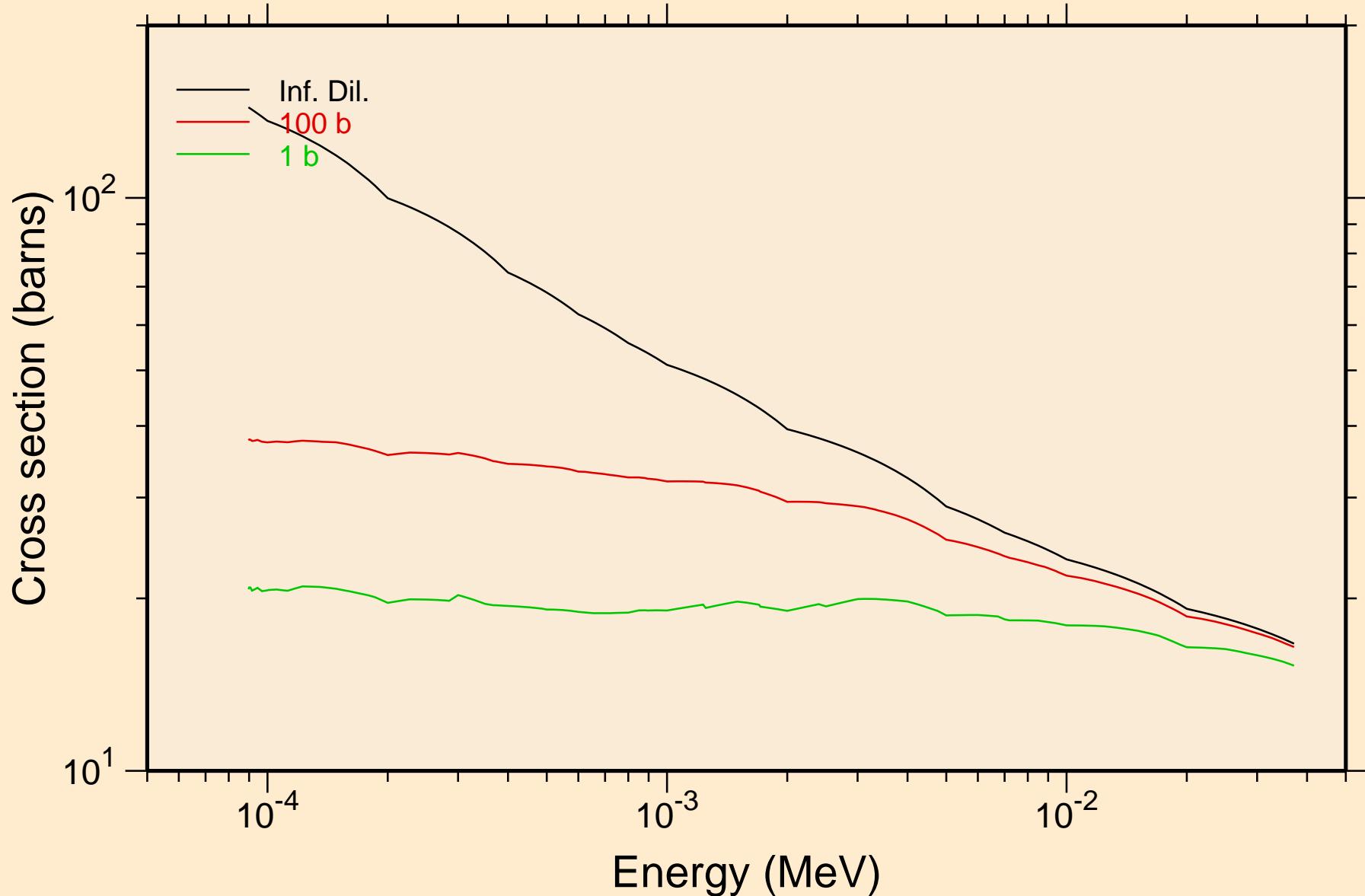
# ADVANCE CALCULATIONS

## resonance absorption cross sections



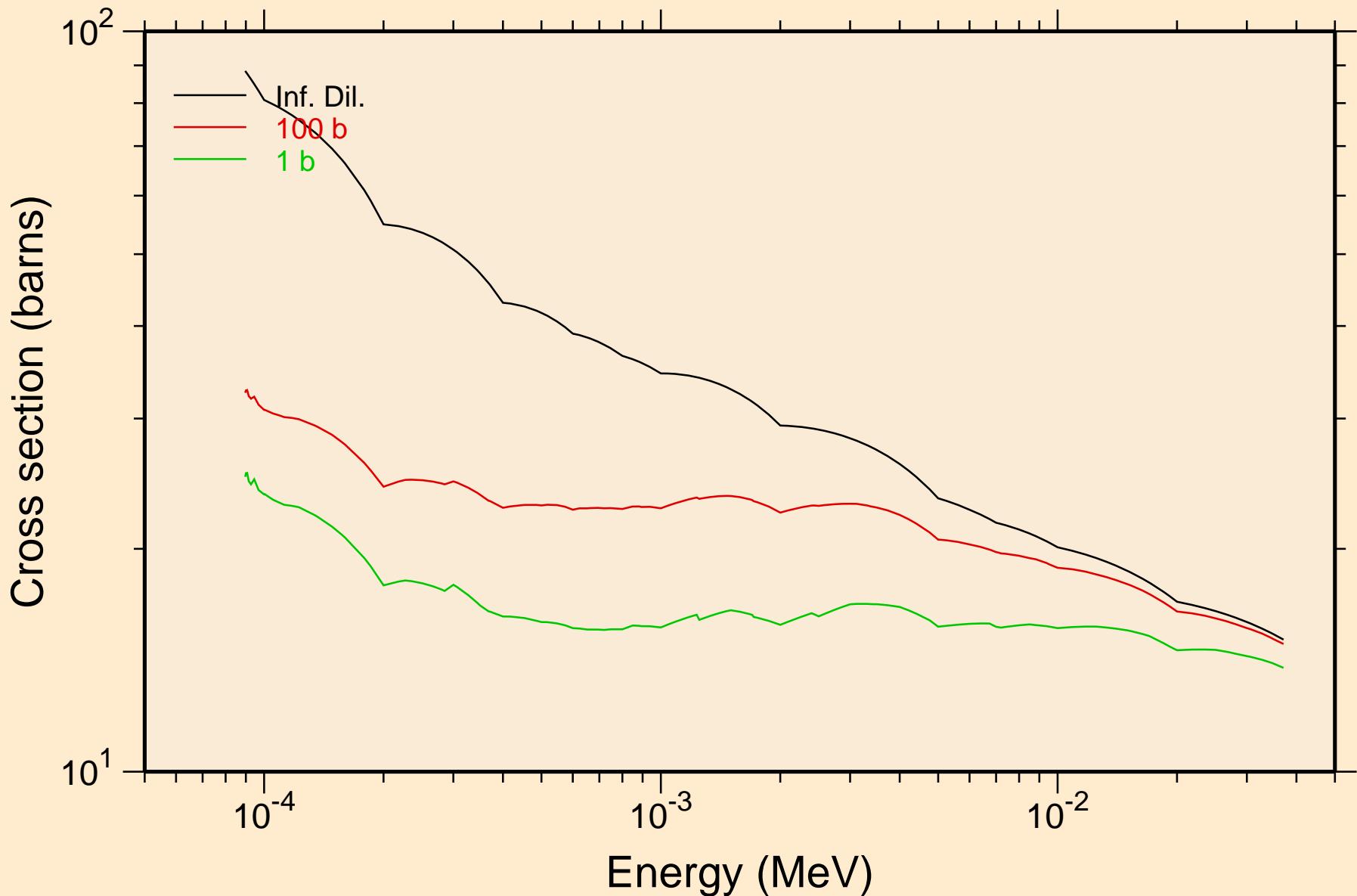
# ADVANCE CALCULATIONS

## UR total cross section



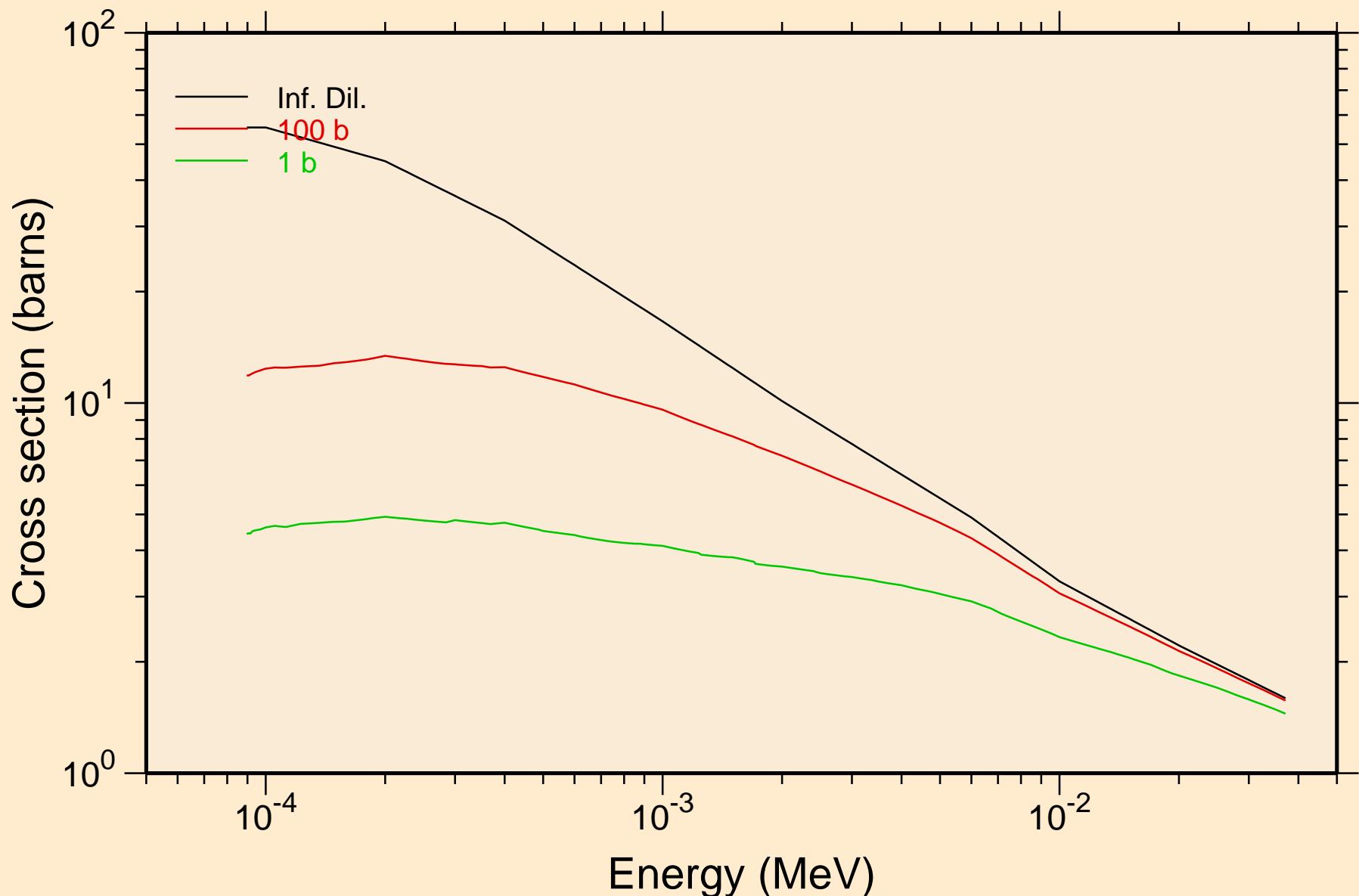
# ADVANCE CALCULATIONS

## UR elastic cross section



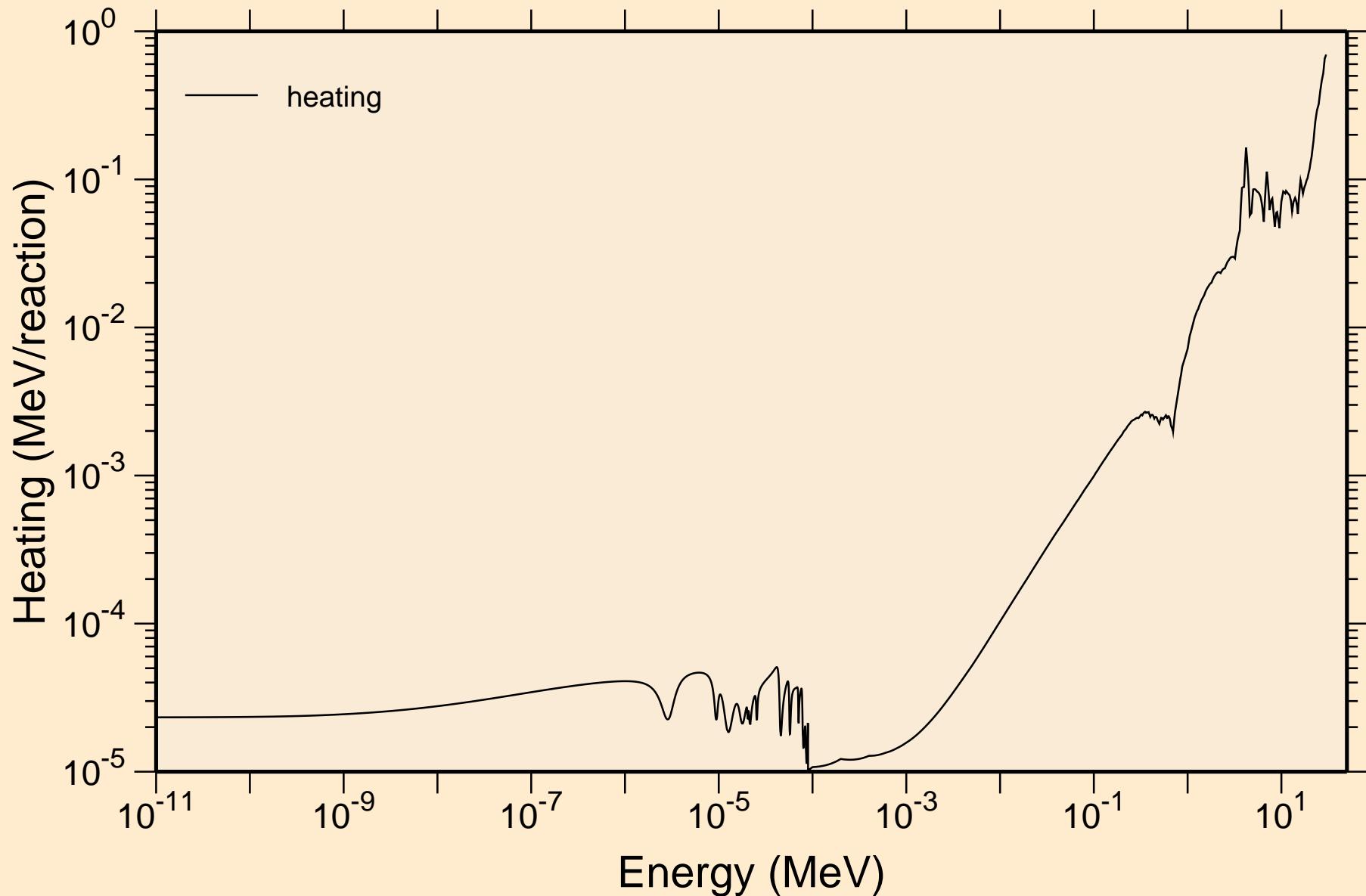
# ADVANCE CALCULATIONS

## UR capture cross section



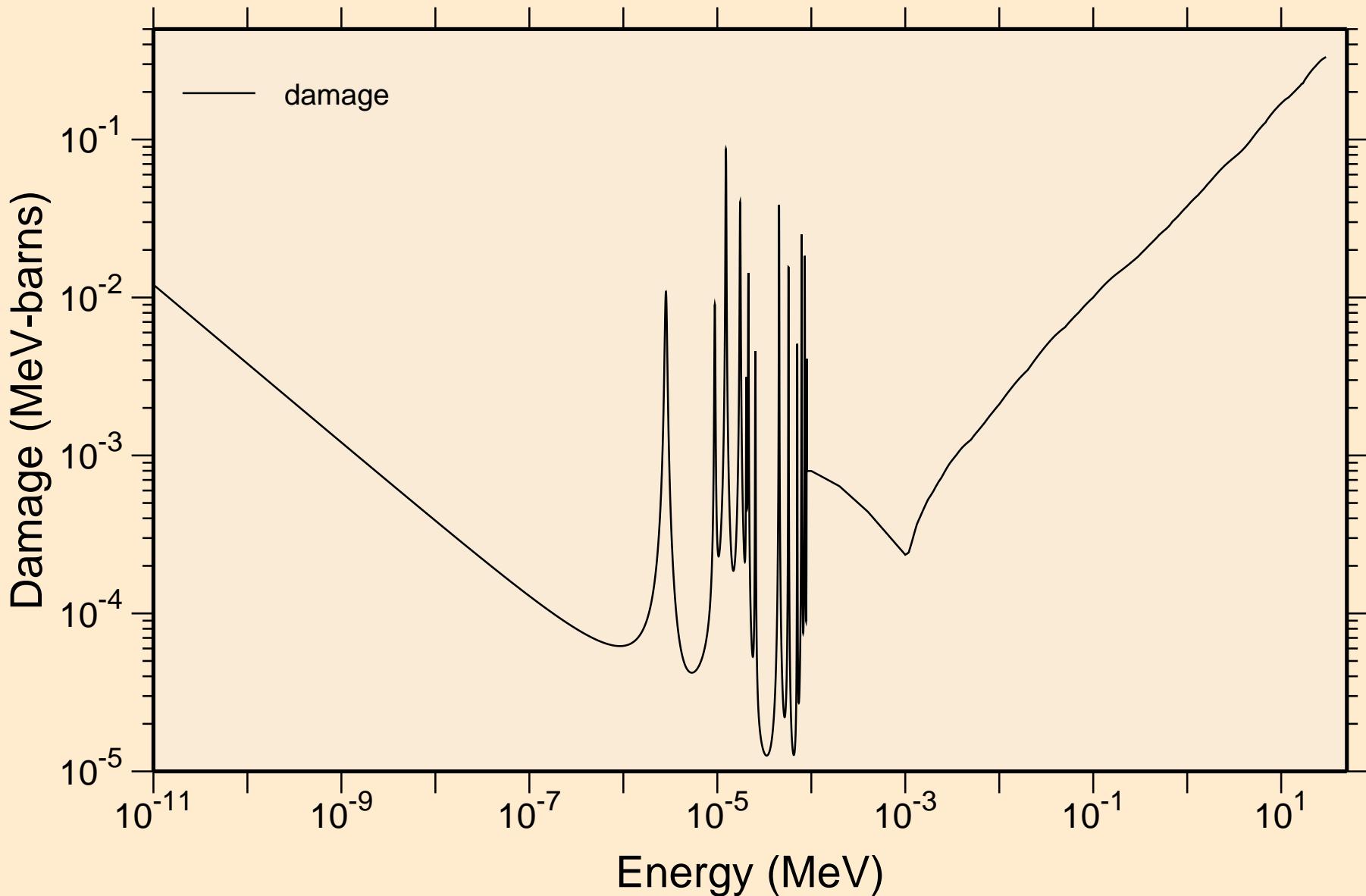
# ADVANCE CALCULATIONS

## Heating



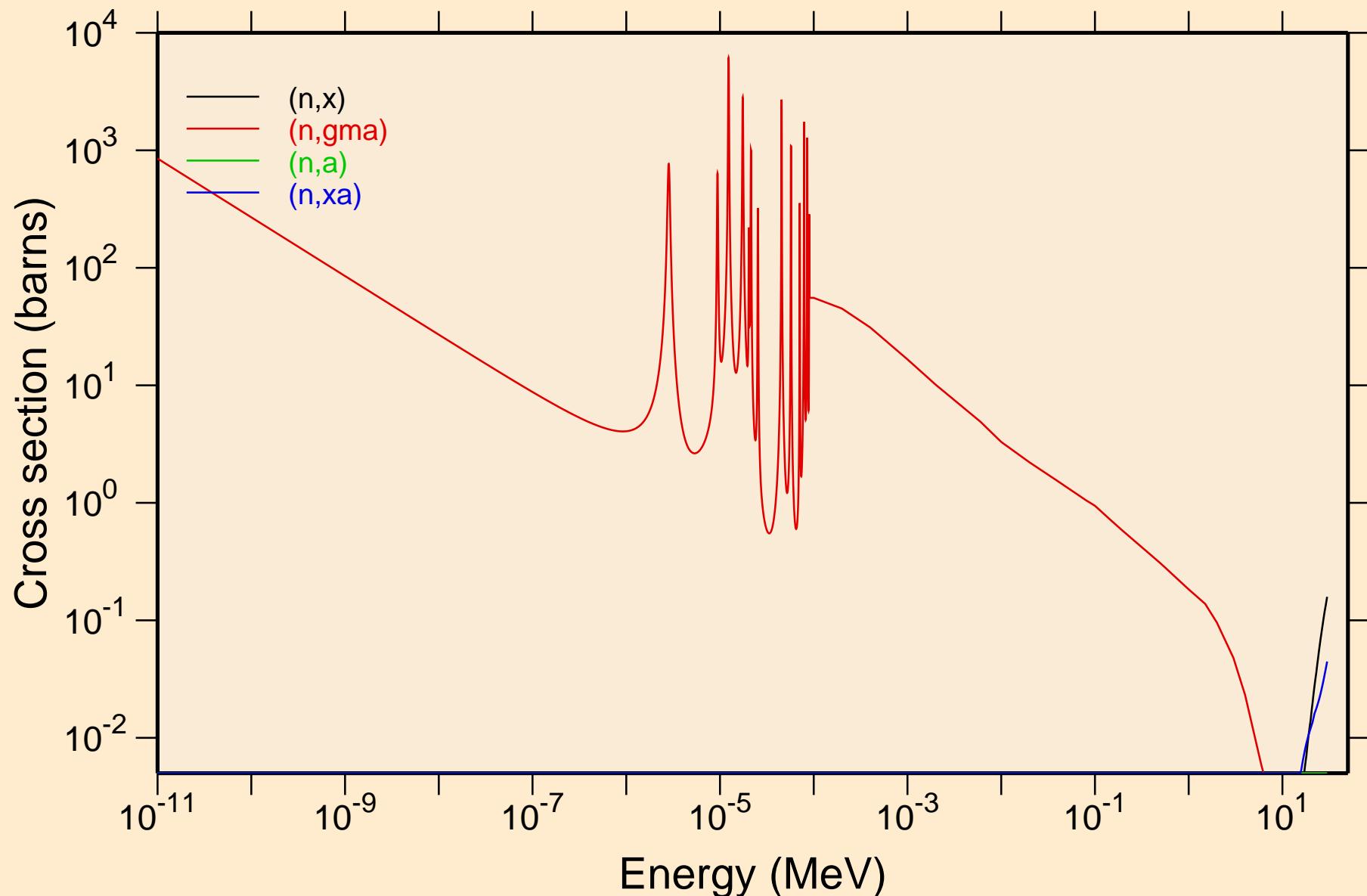
# ADVANCE CALCULATIONS

## Damage



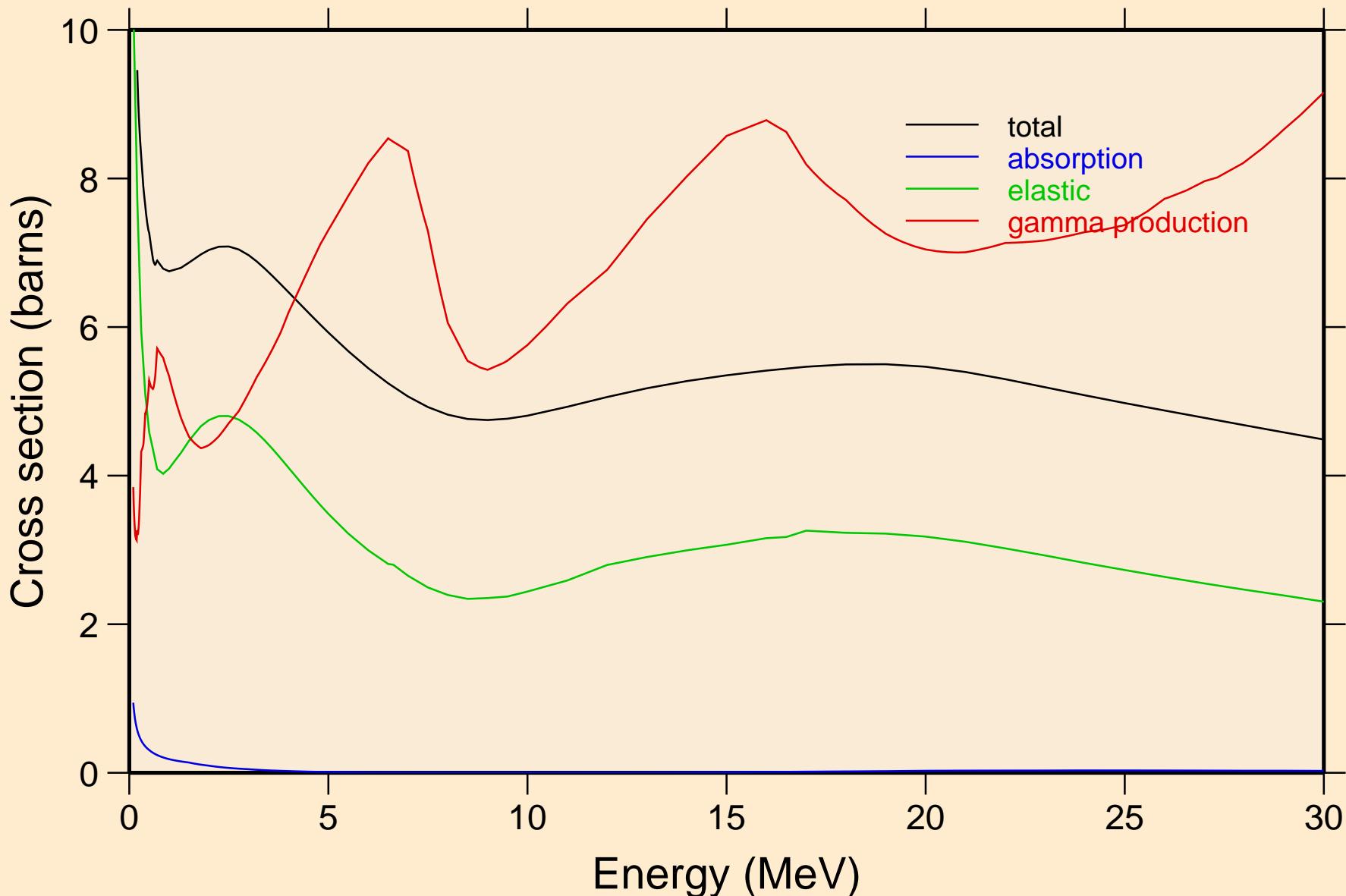
# ADVANCE CALCULATIONS

## Non-threshold reactions



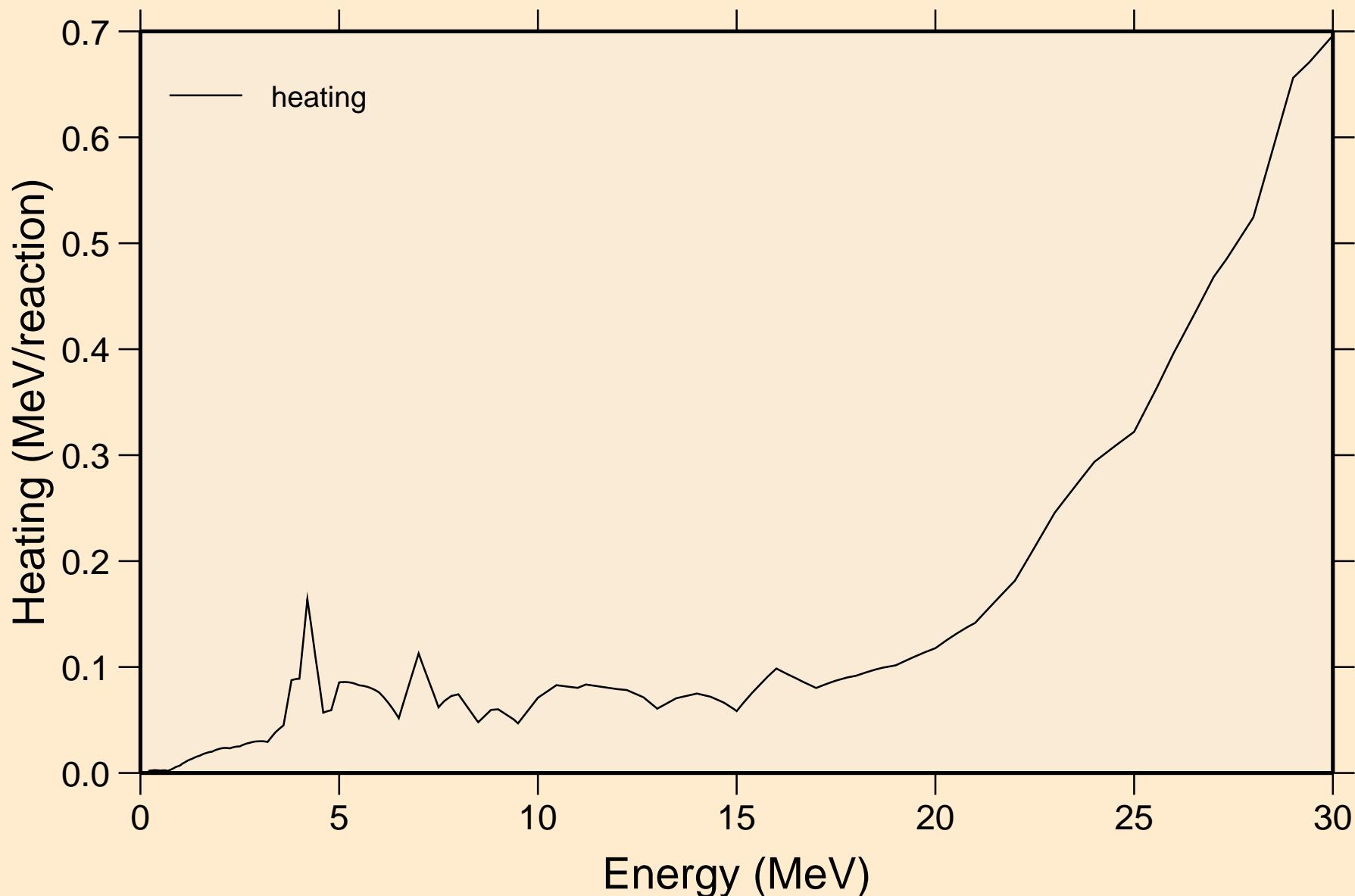
# ADVANCE CALCULATIONS

## Principal cross sections



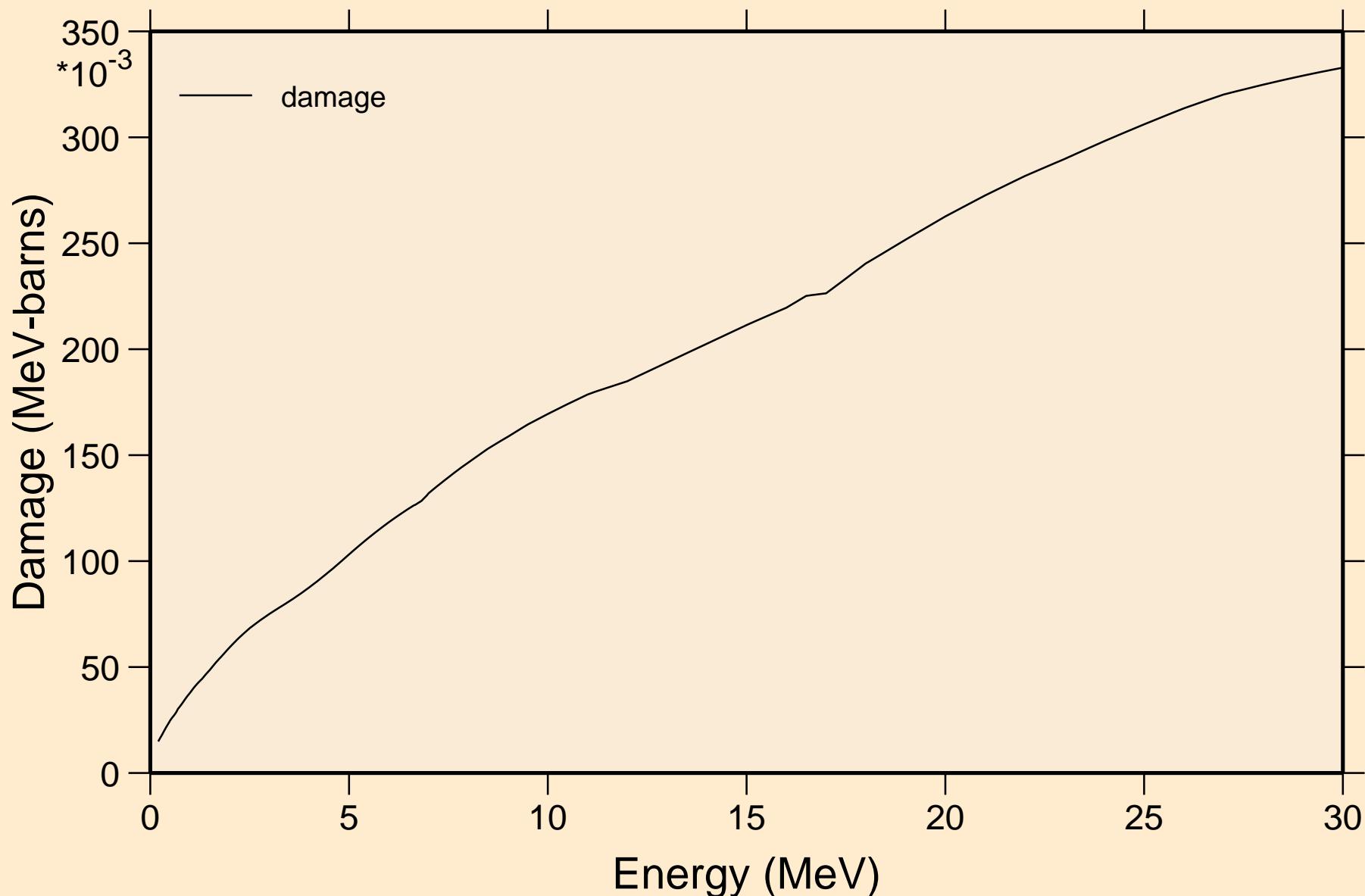
# ADVANCE CALCULATIONS

## Heating



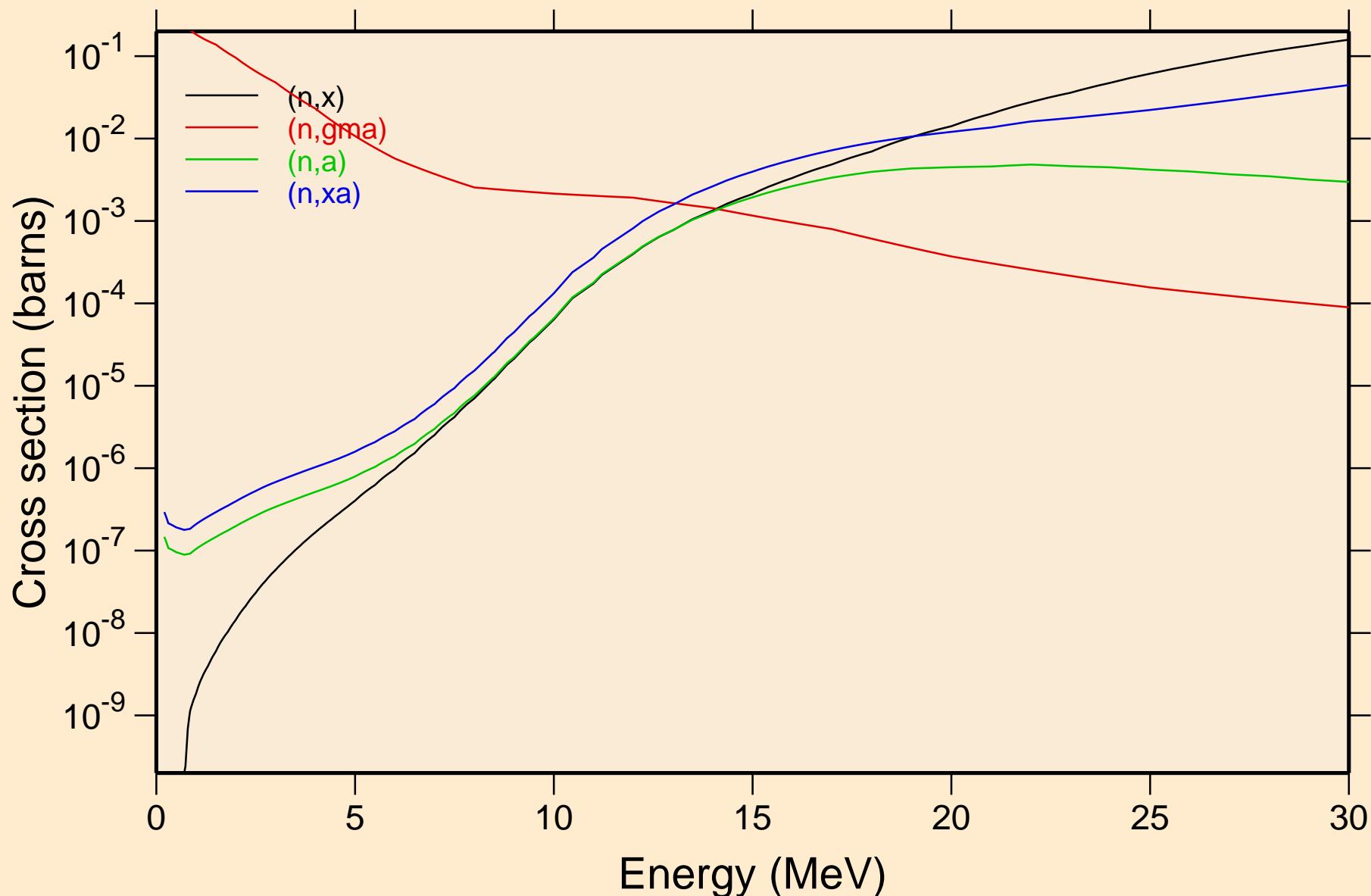
# ADVANCE CALCULATIONS

## Damage



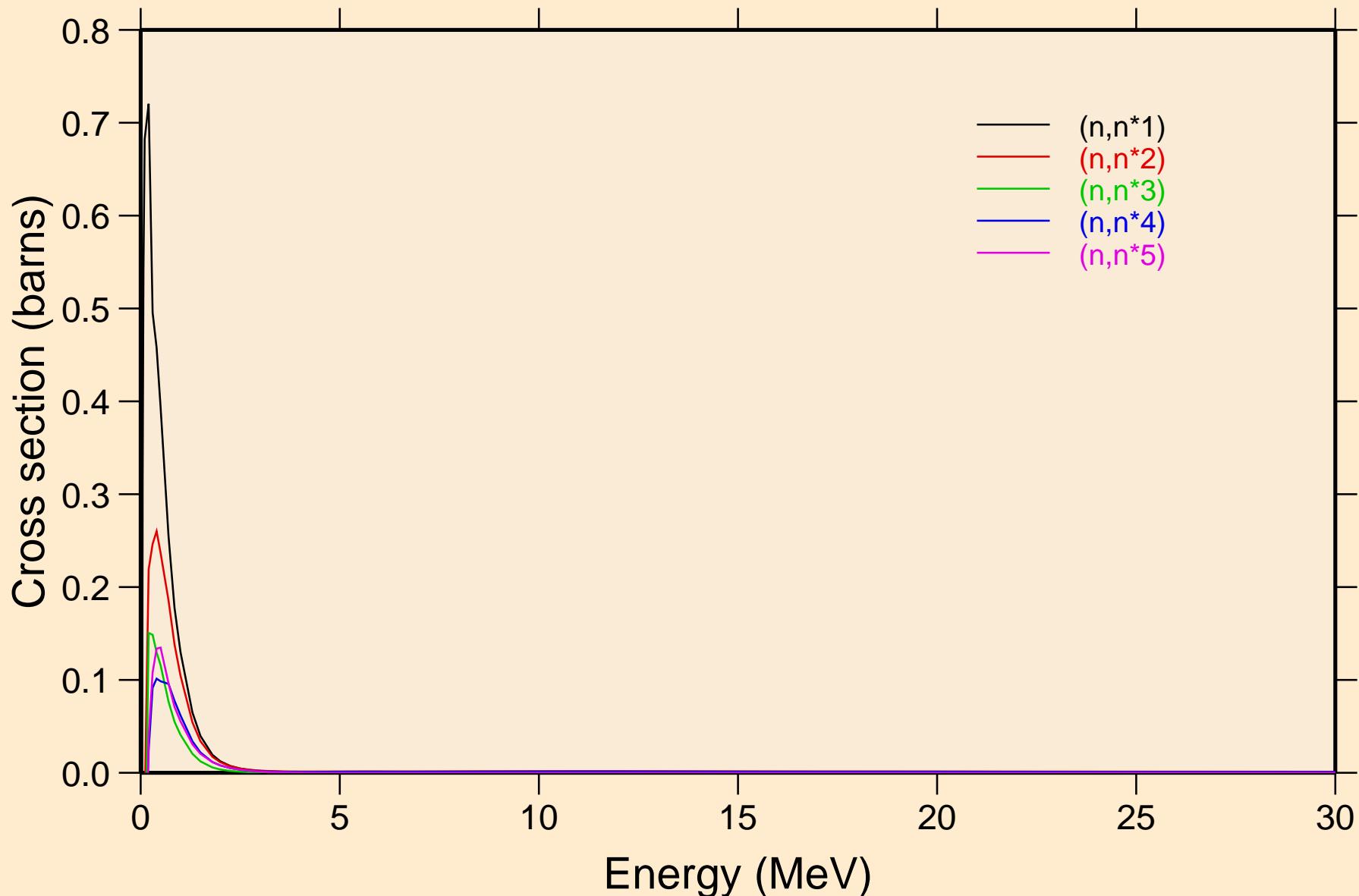
# ADVANCE CALCULATIONS

## Non-threshold reactions



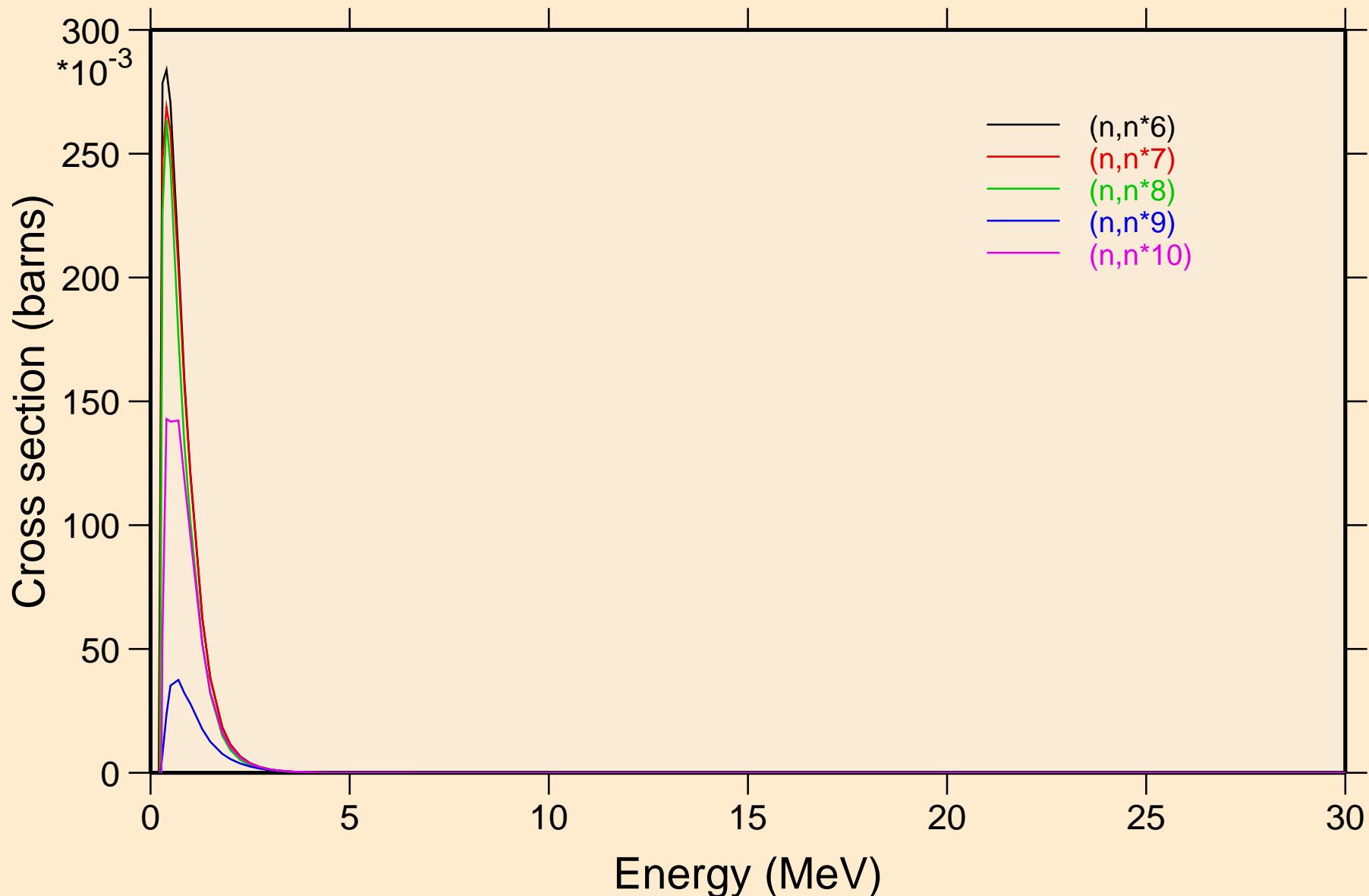
# ADVANCE CALCULATIONS

## Inelastic levels



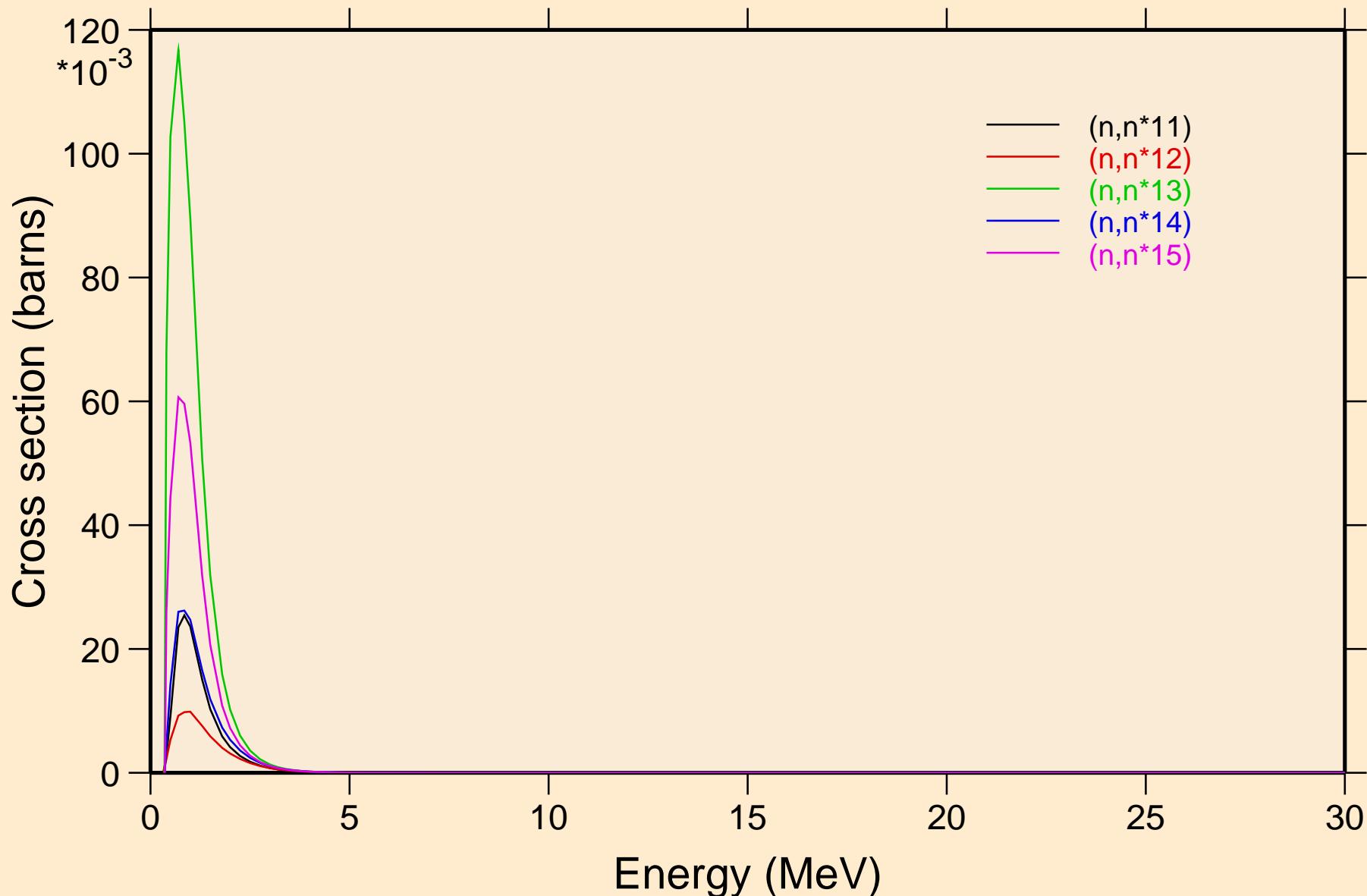
# ADVANCE CALCULATIONS

## Inelastic levels



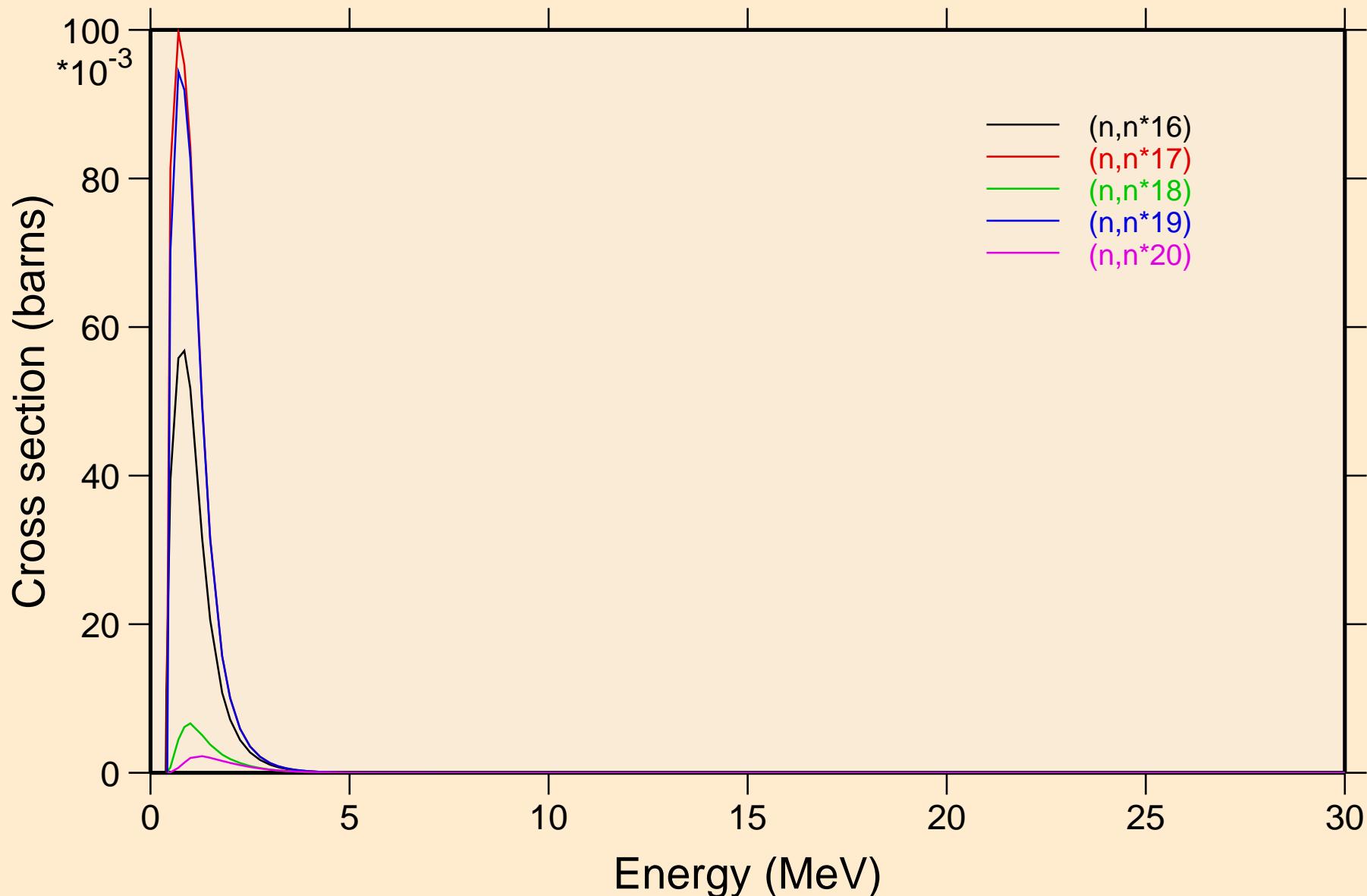
# ADVANCE CALCULATIONS

## Inelastic levels



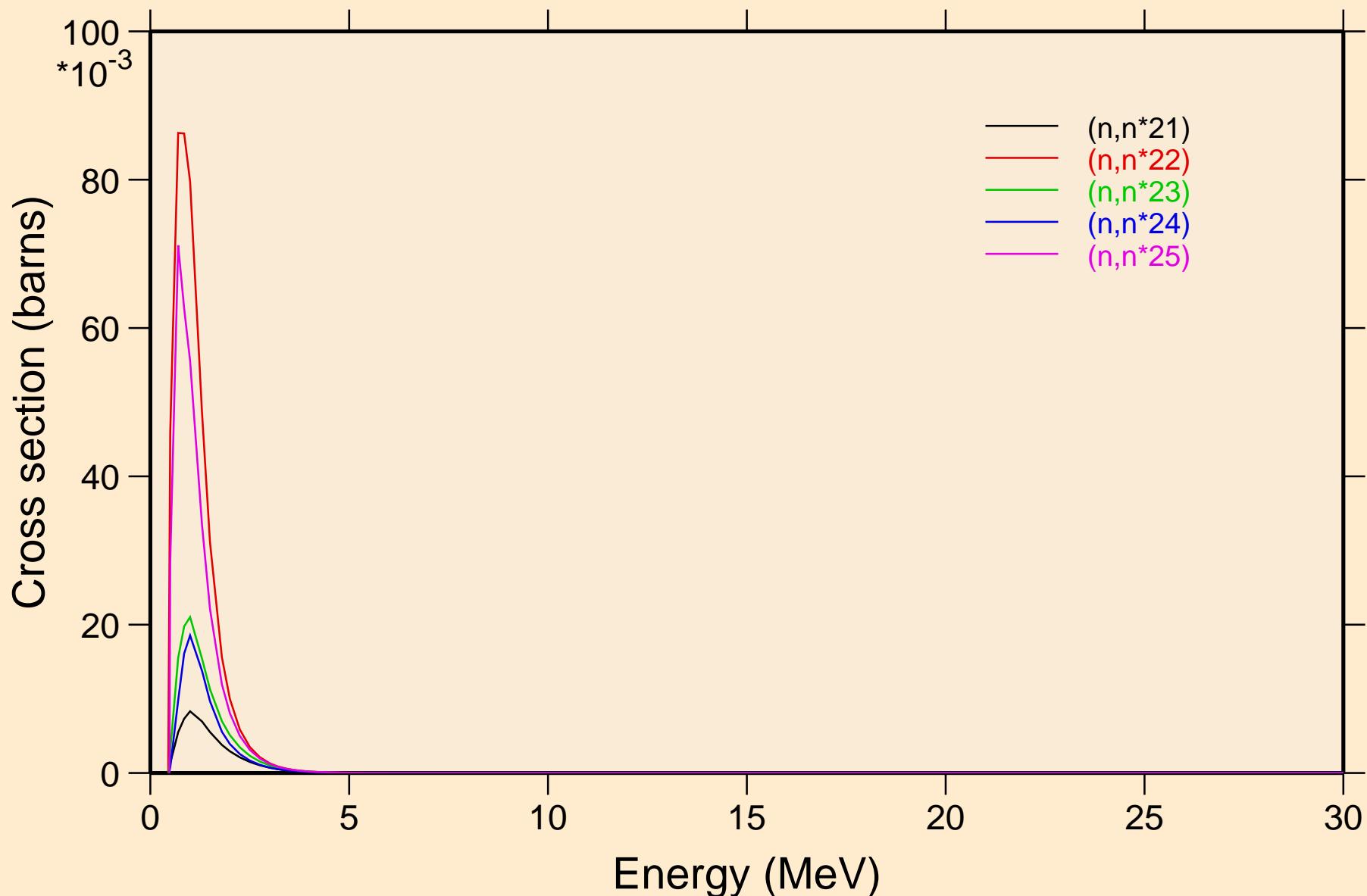
# ADVANCE CALCULATIONS

## Inelastic levels



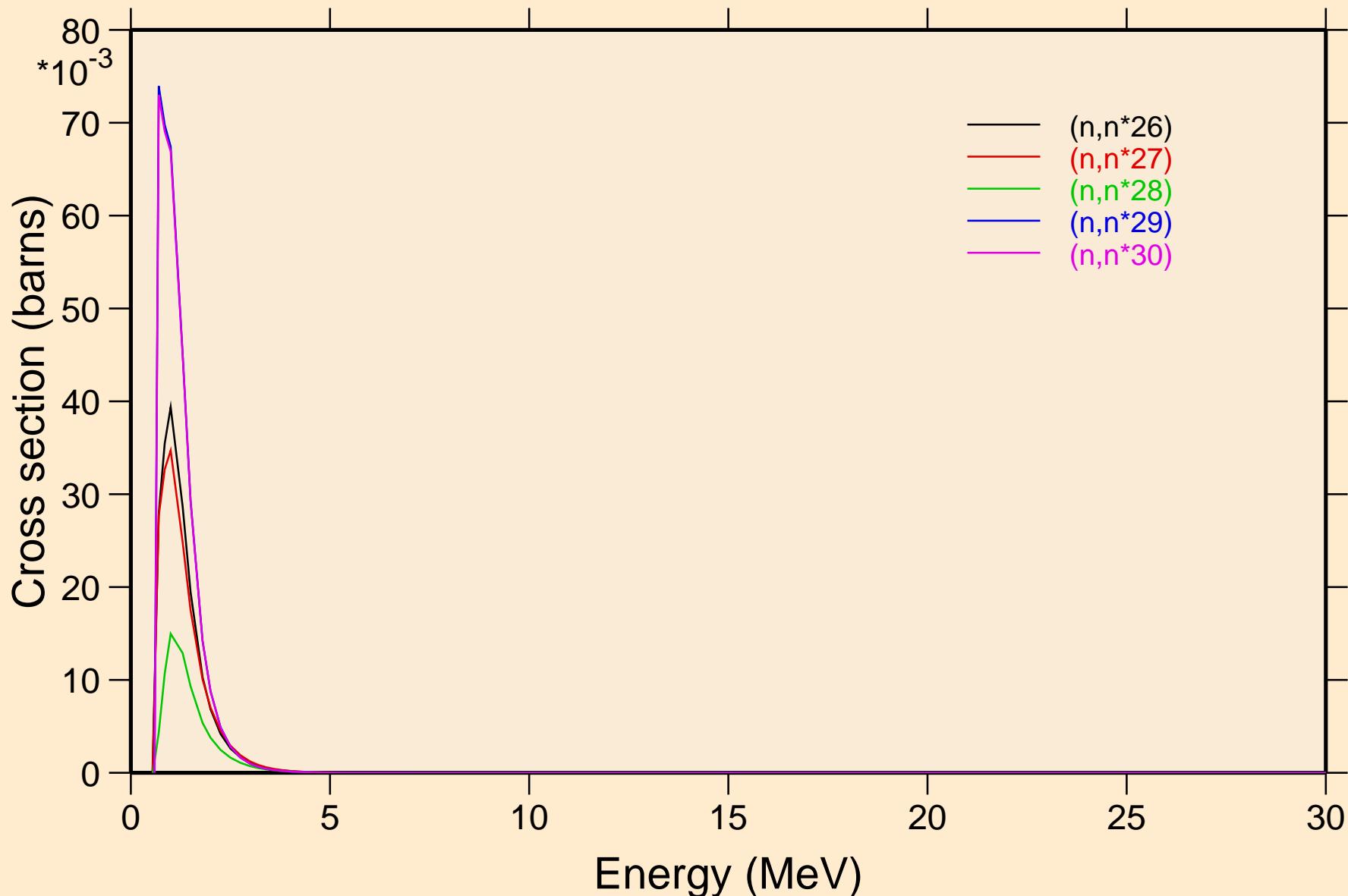
# ADVANCE CALCULATIONS

## Inelastic levels



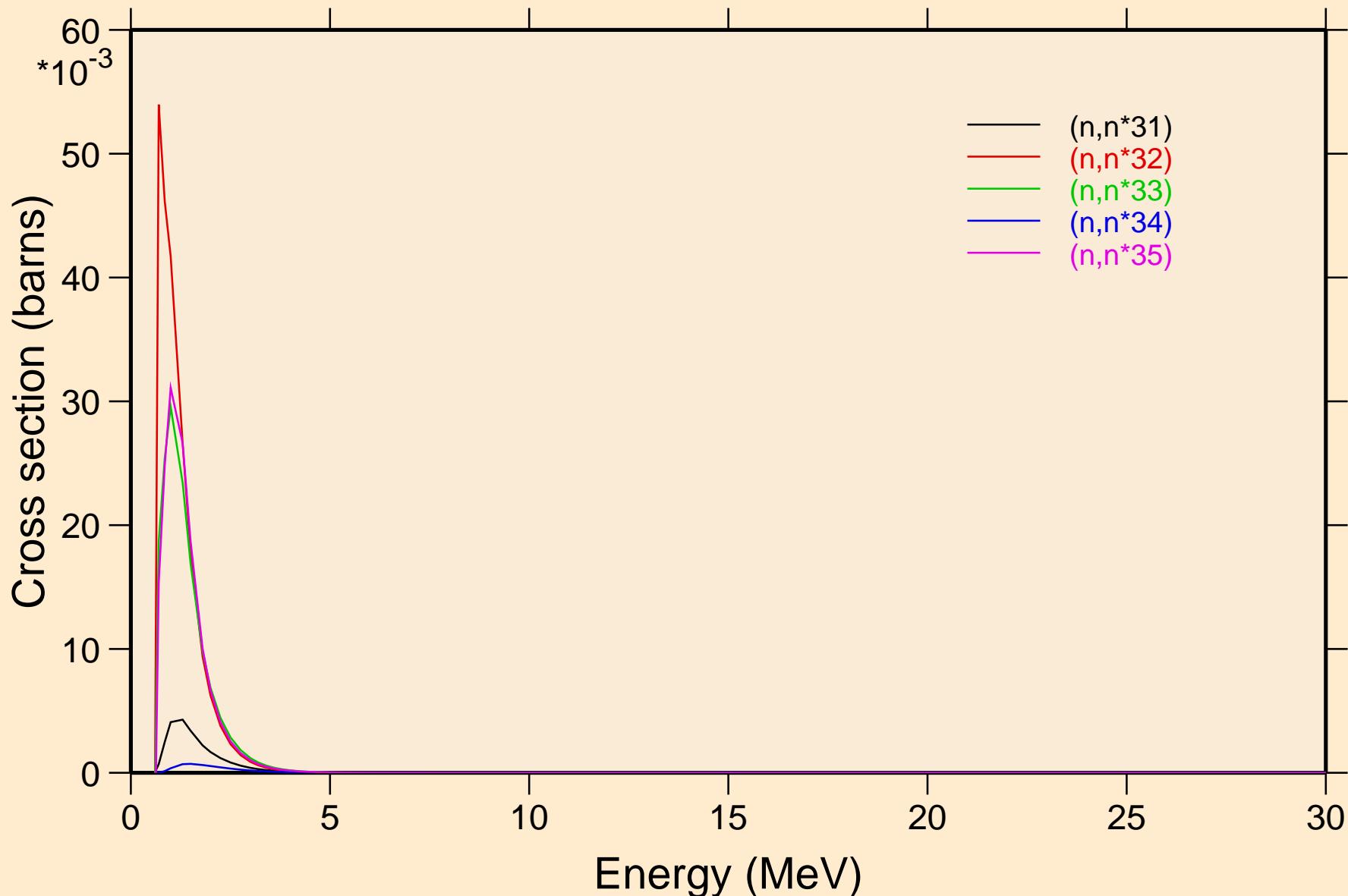
# ADVANCE CALCULATIONS

## Inelastic levels



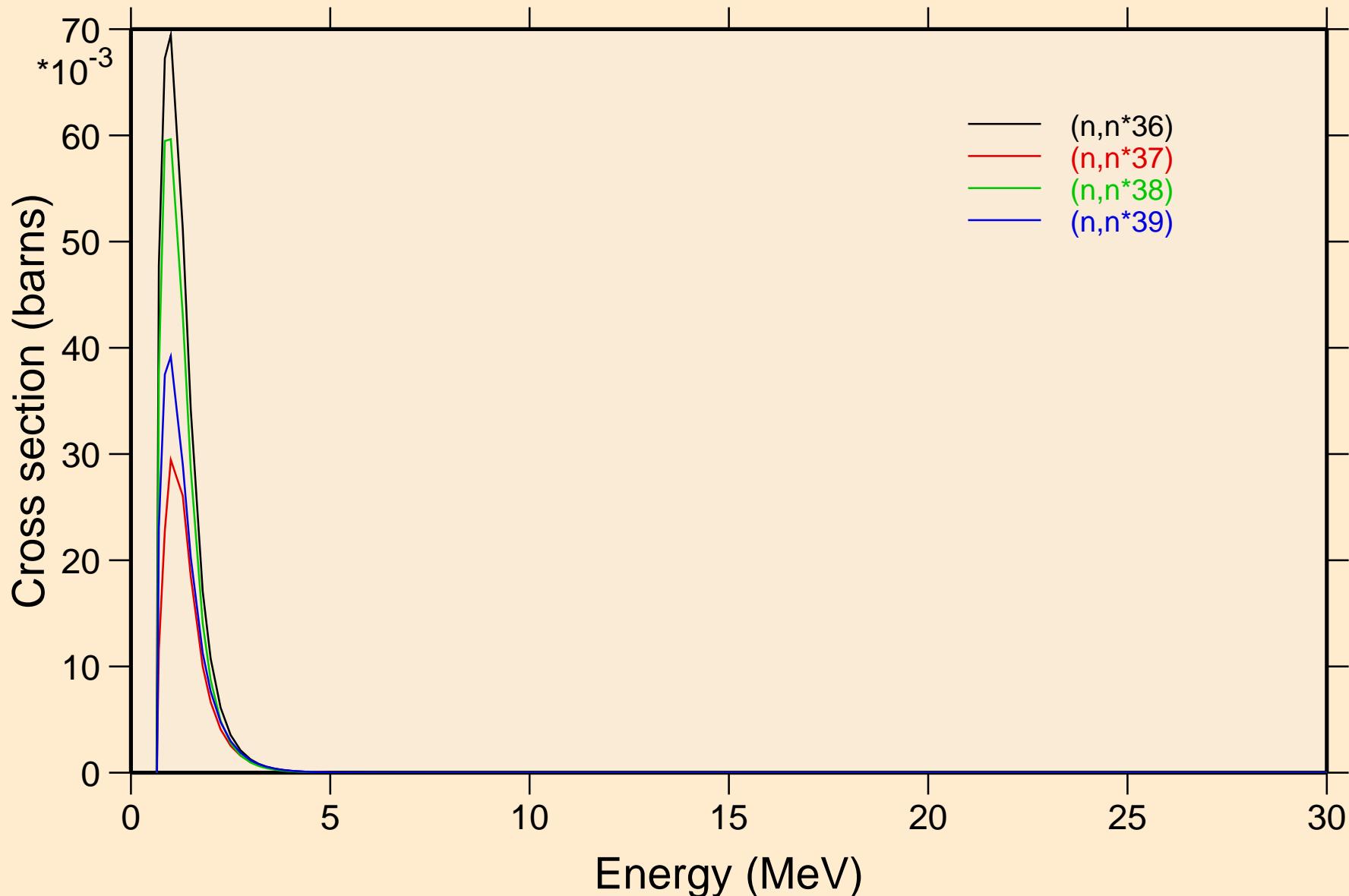
# ADVANCE CALCULATIONS

## Inelastic levels



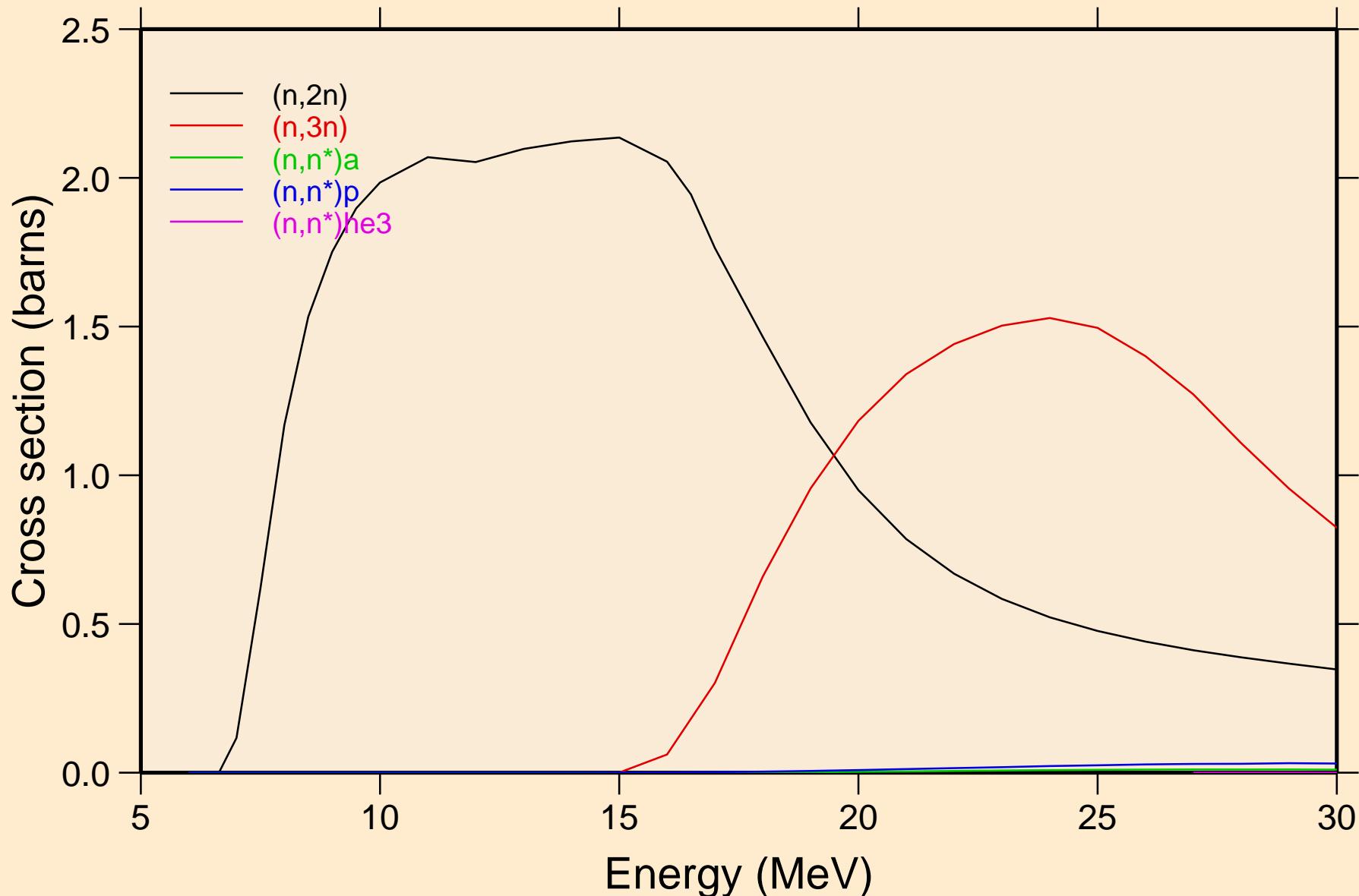
# ADVANCE CALCULATIONS

## Inelastic levels



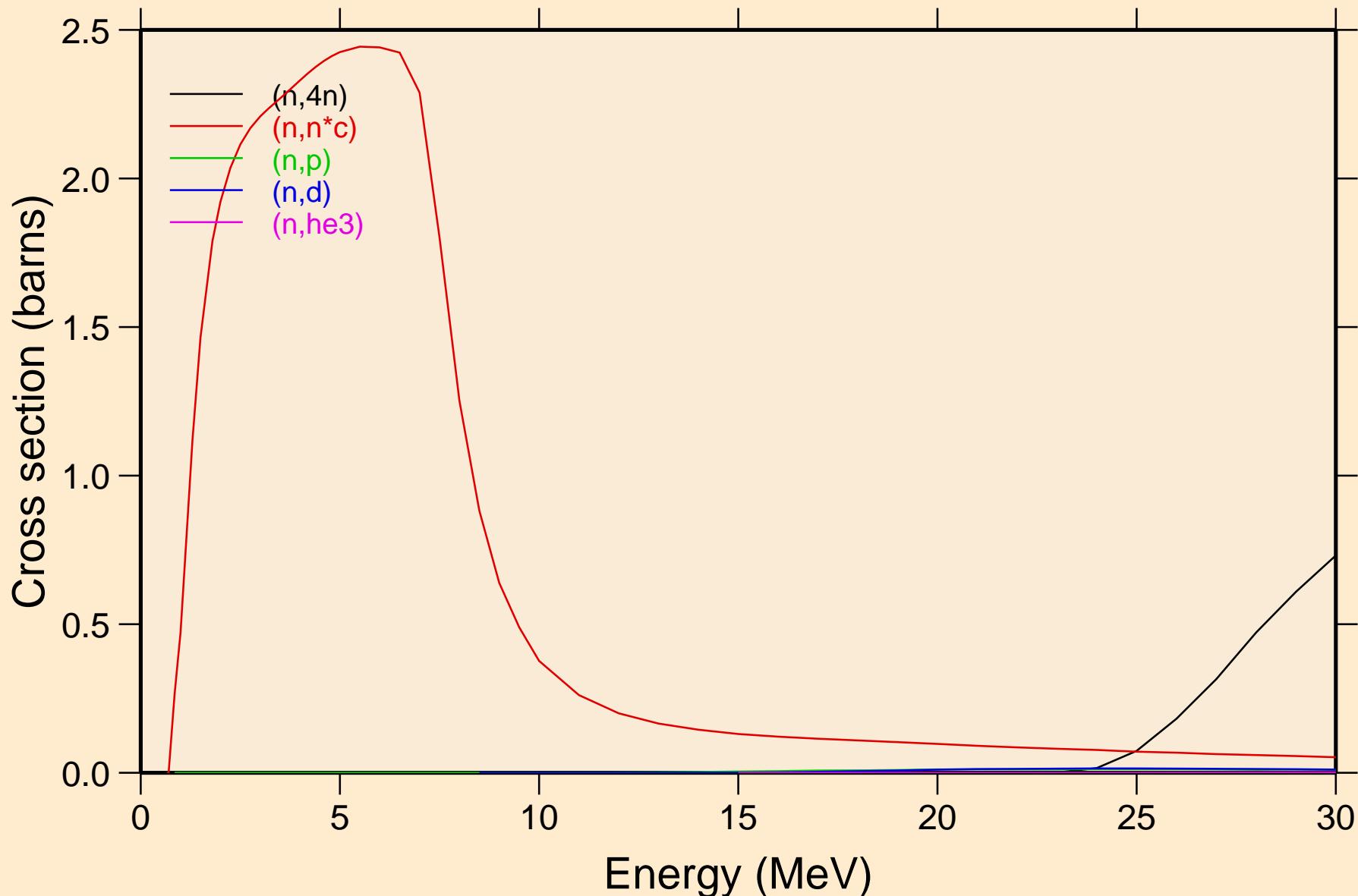
# ADVANCE CALCULATIONS

## Threshold reactions



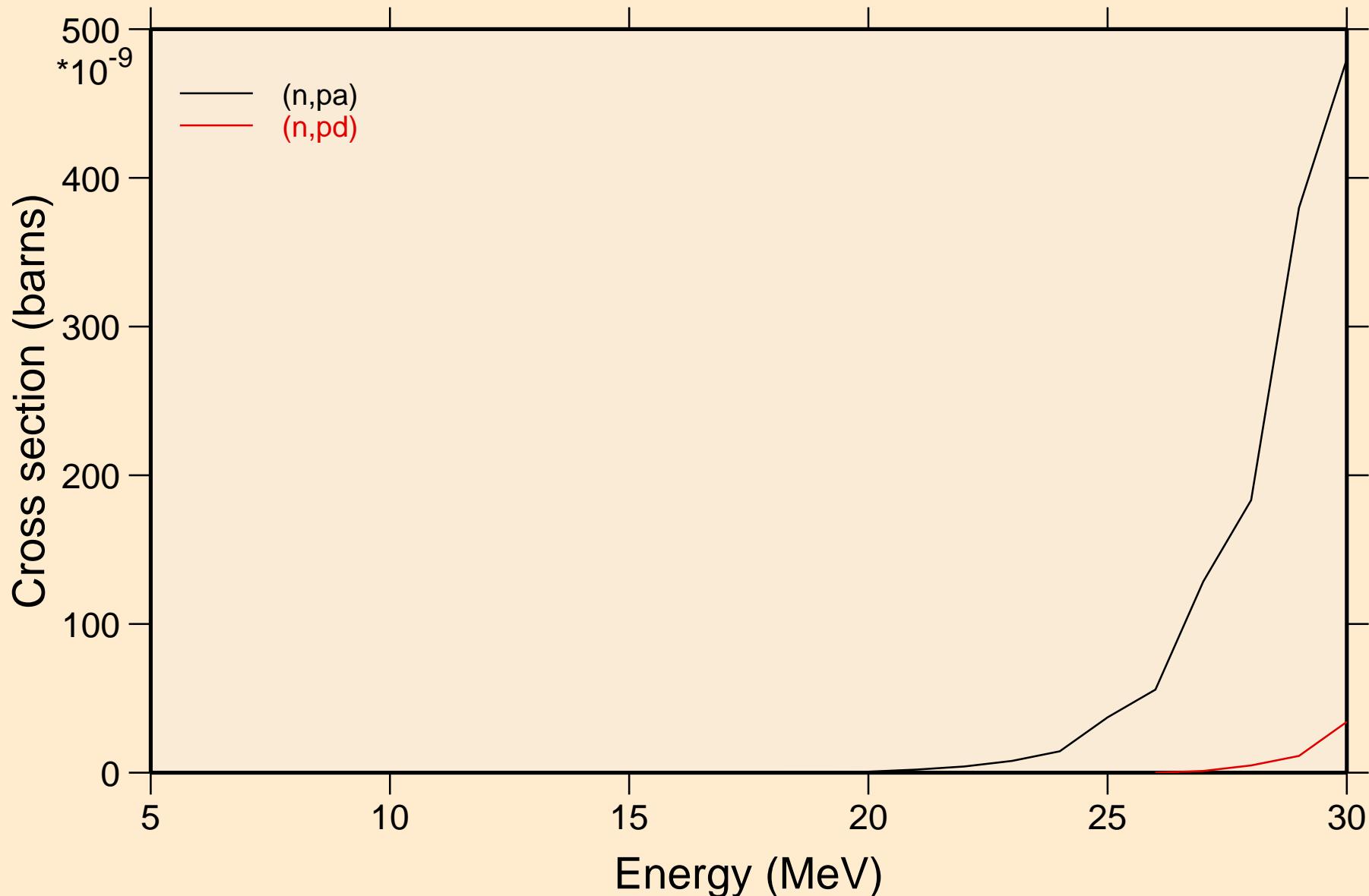
# ADVANCE CALCULATIONS

## Threshold reactions



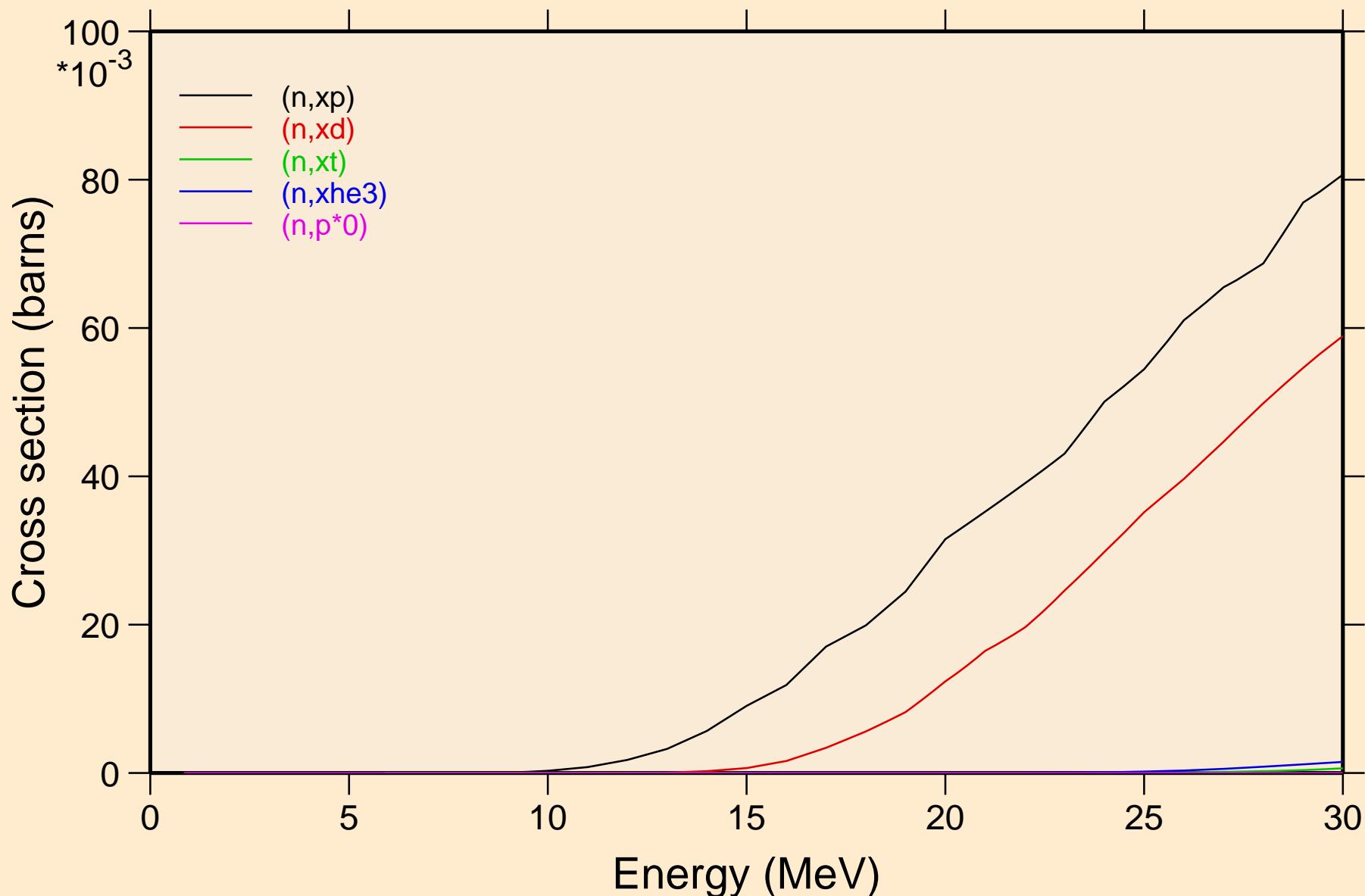
# ADVANCE CALCULATIONS

## Threshold reactions



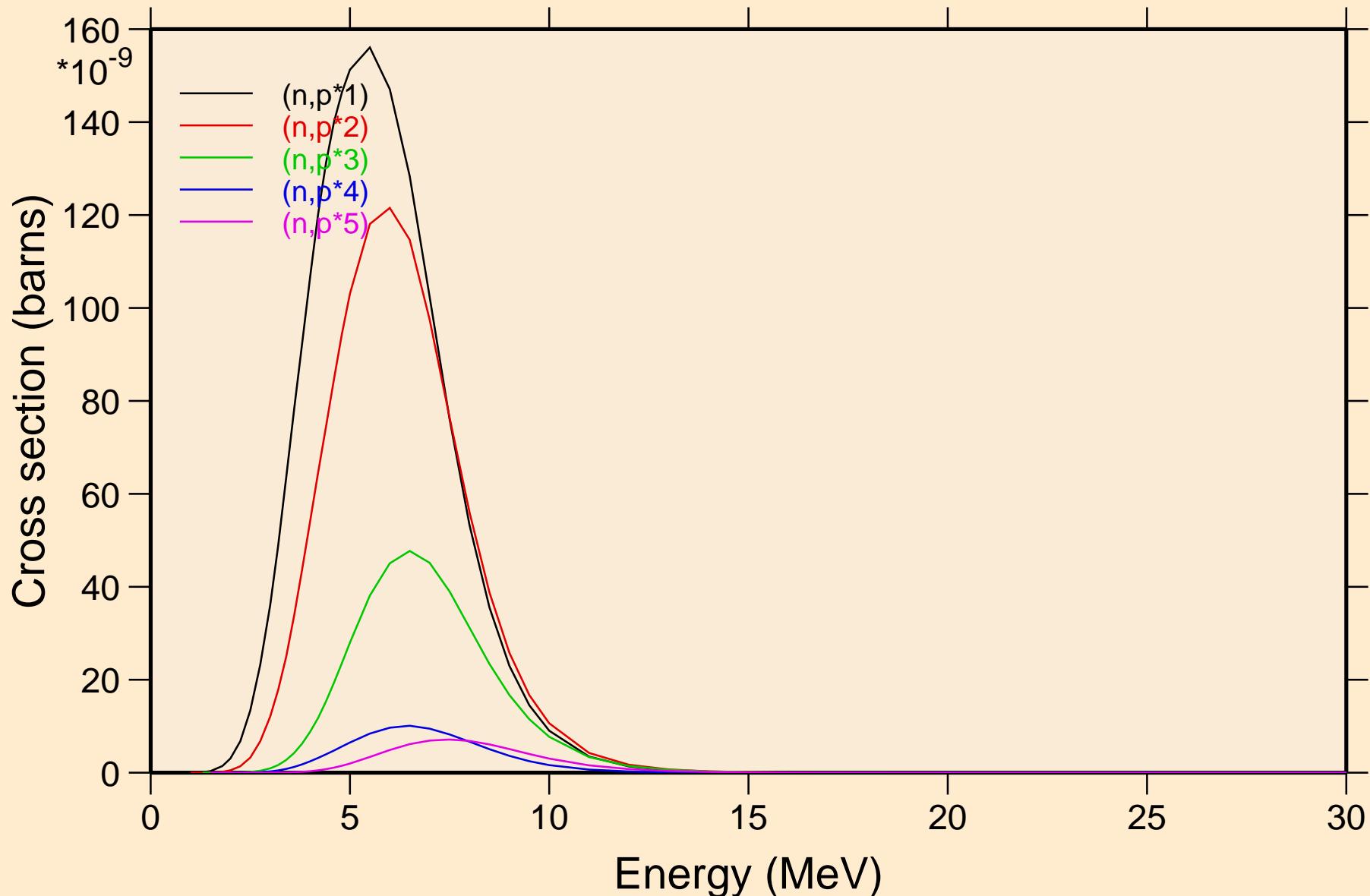
# ADVANCE CALCULATIONS

## Threshold reactions



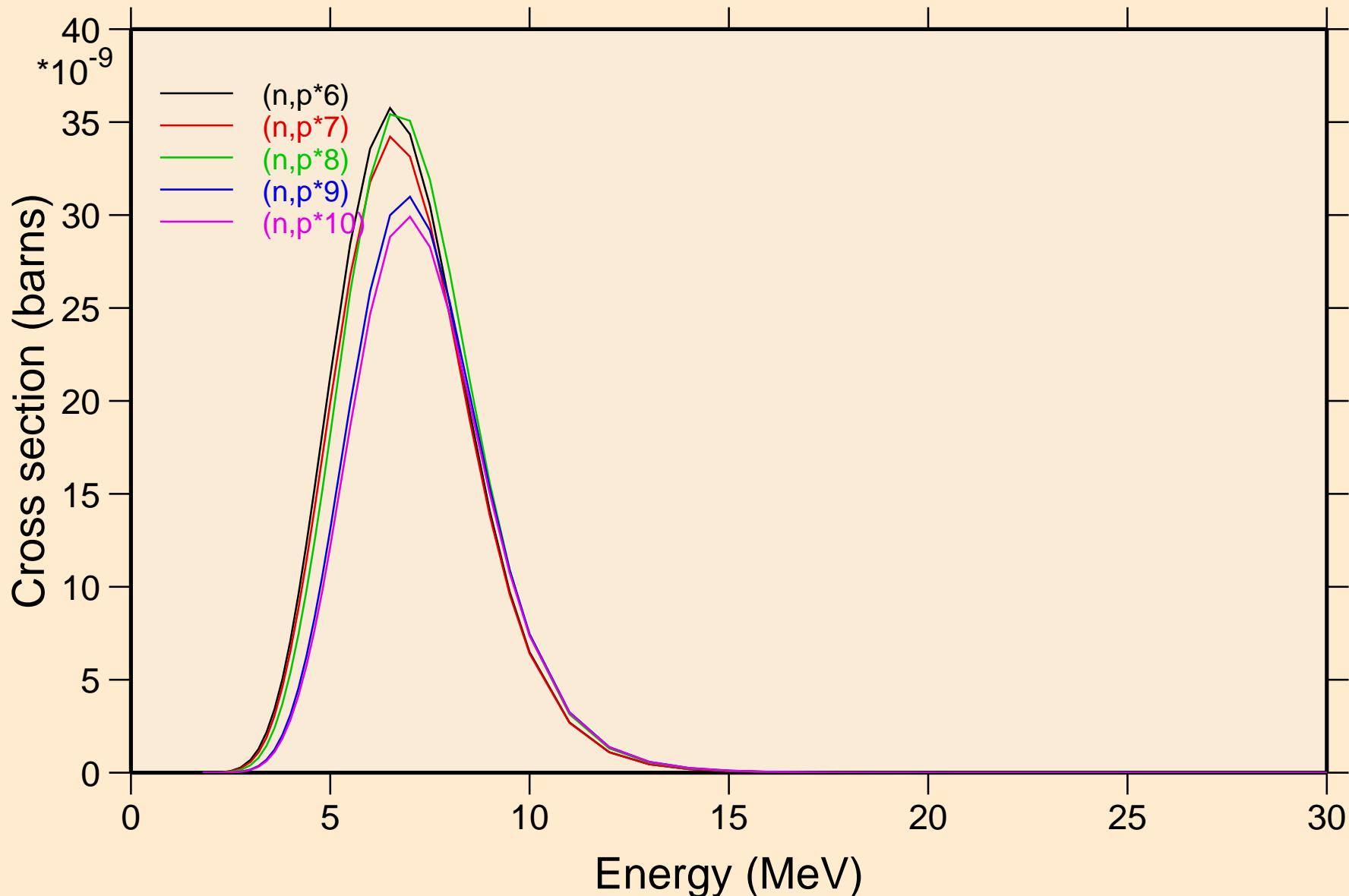
# ADVANCE CALCULATIONS

## Threshold reactions



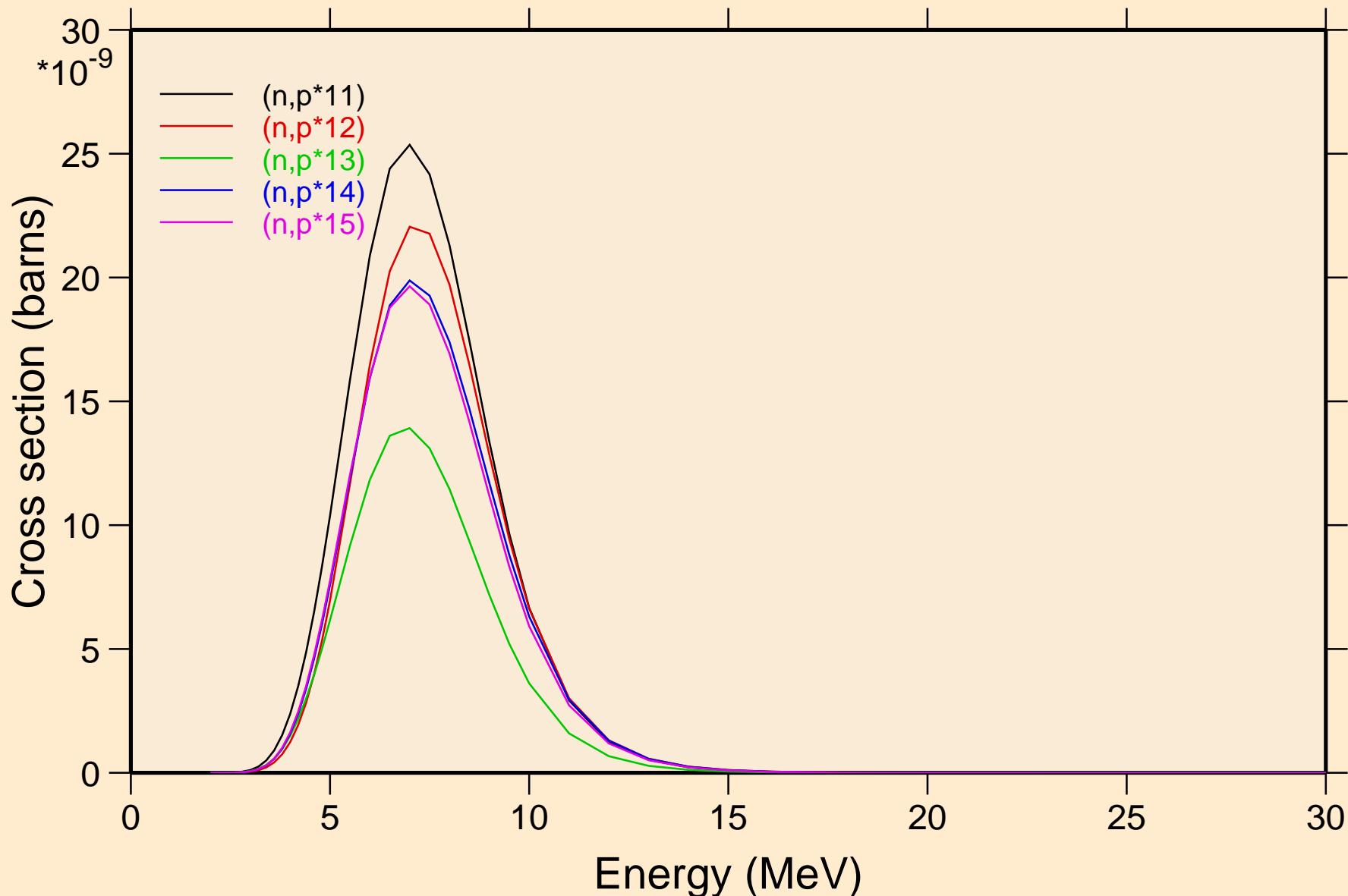
# ADVANCE CALCULATIONS

## Threshold reactions



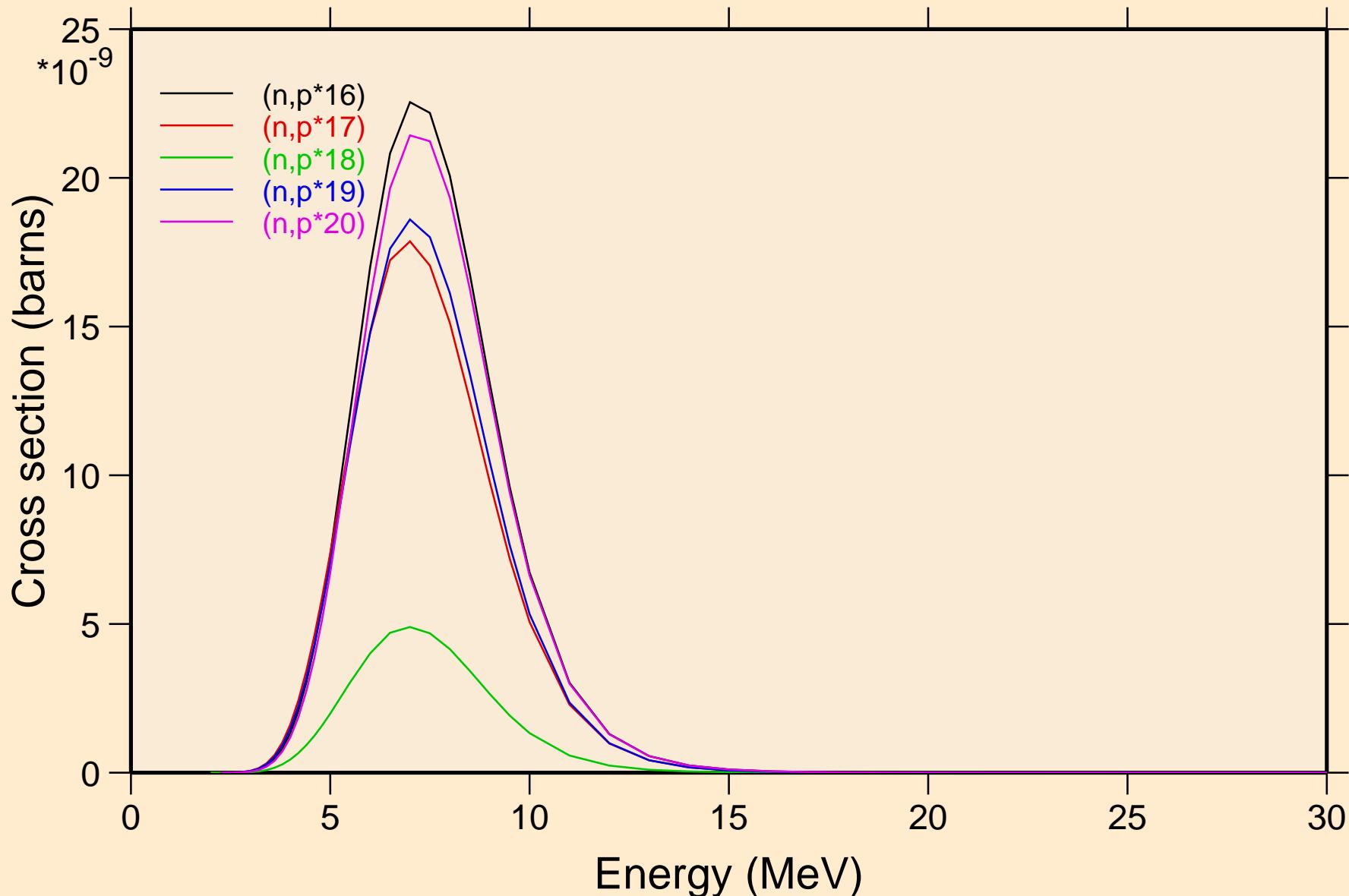
# ADVANCE CALCULATIONS

## Threshold reactions



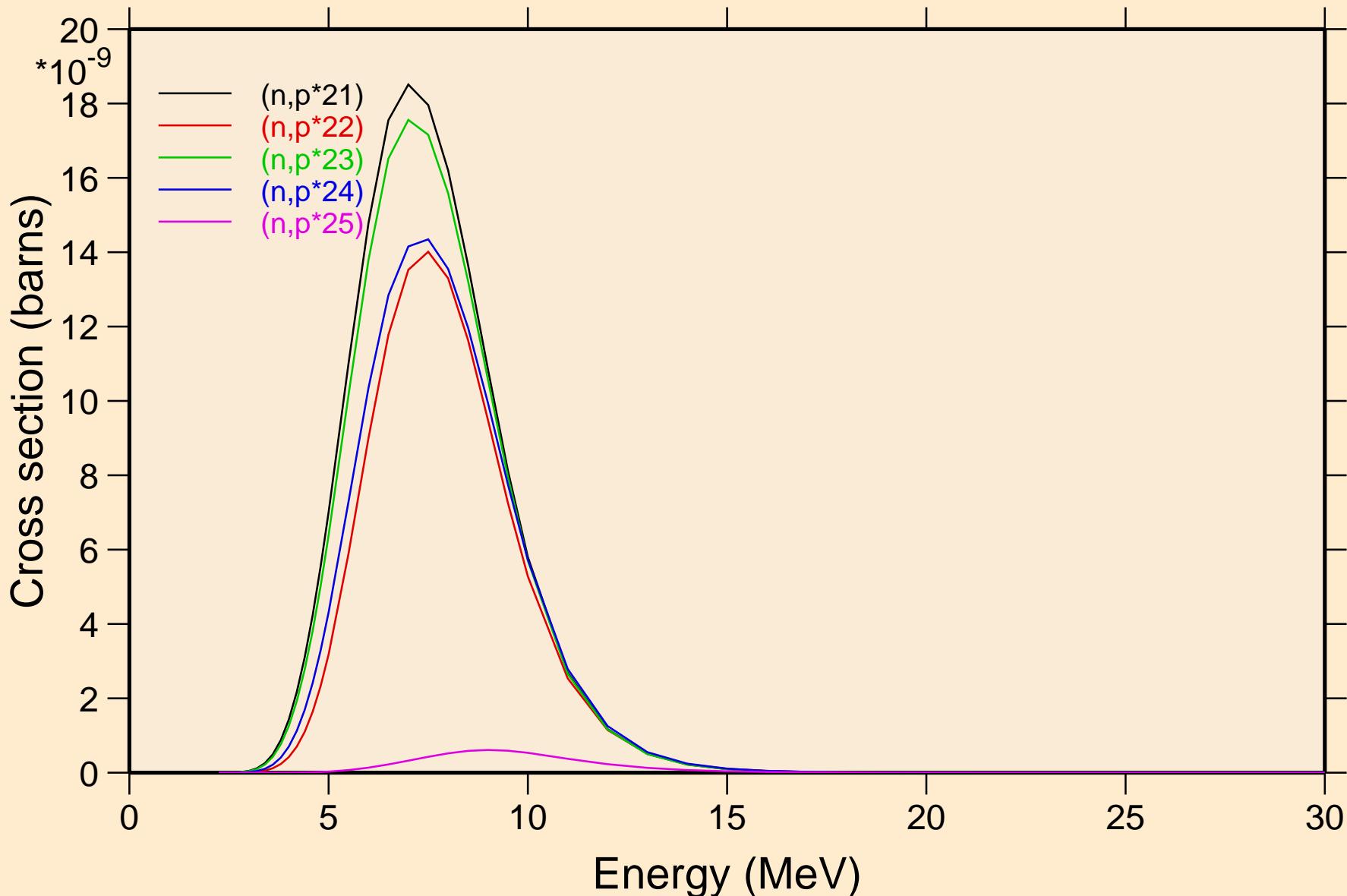
# ADVANCE CALCULATIONS

## Threshold reactions



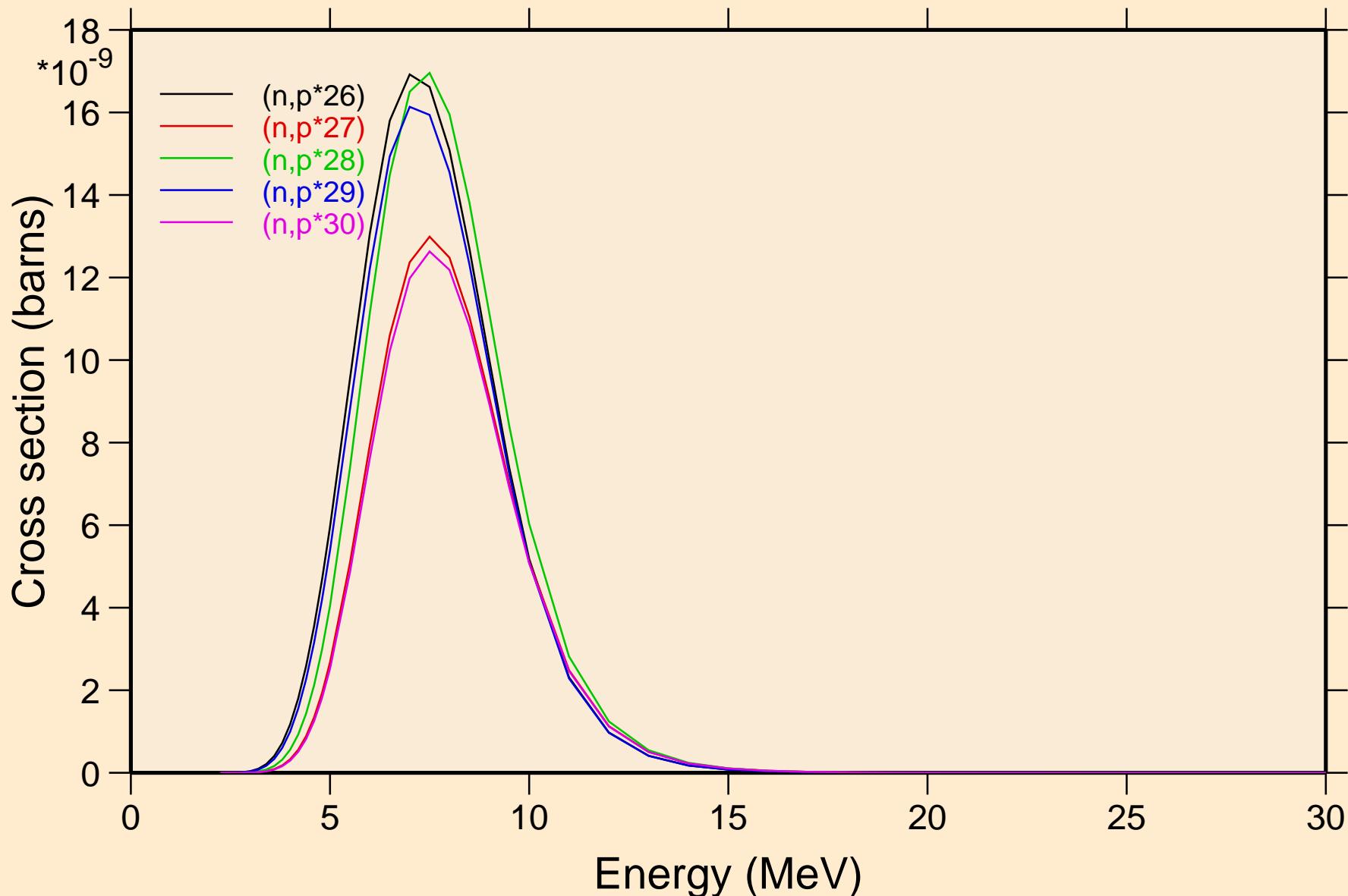
# ADVANCE CALCULATIONS

## Threshold reactions



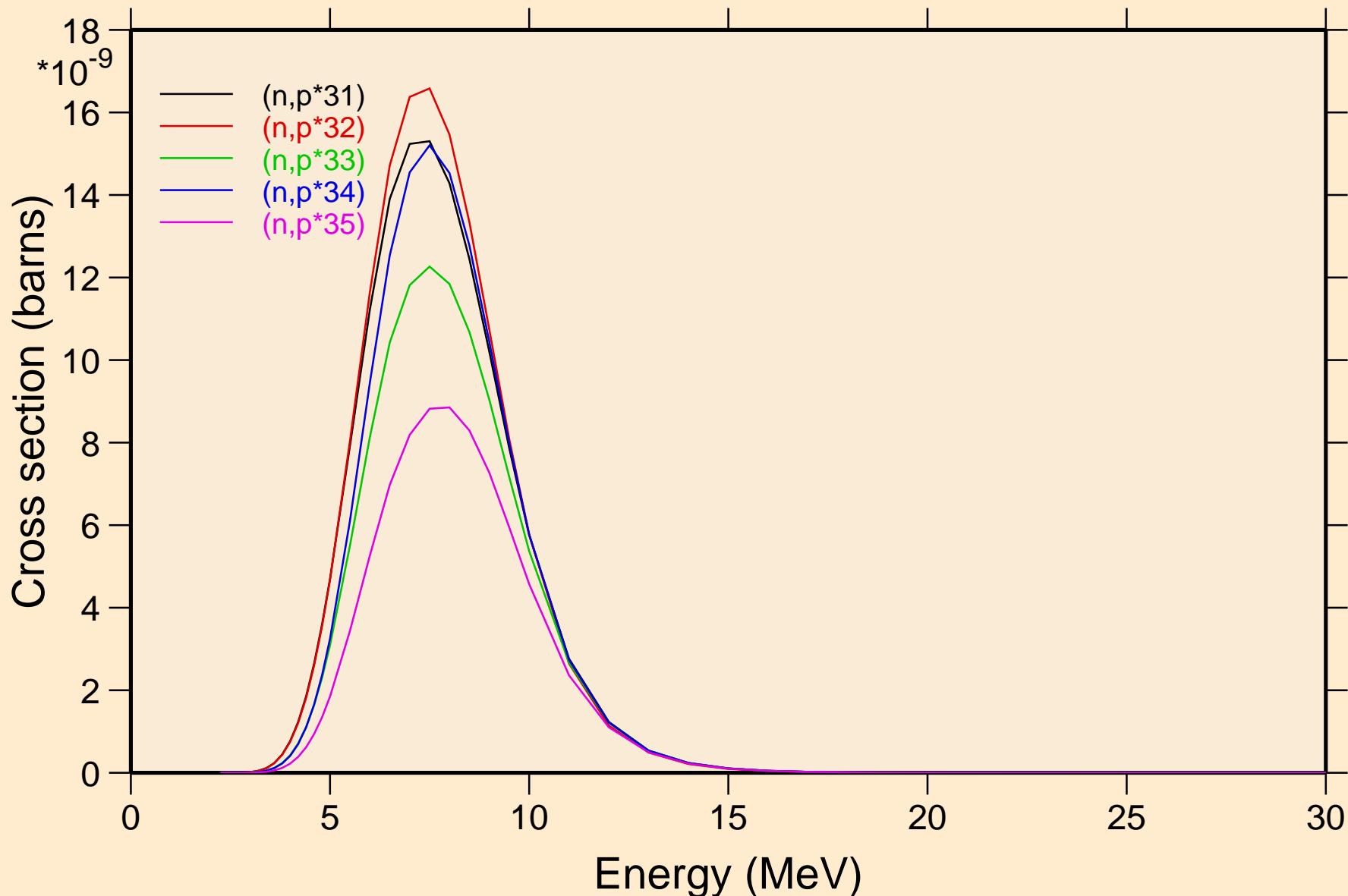
# ADVANCE CALCULATIONS

## Threshold reactions



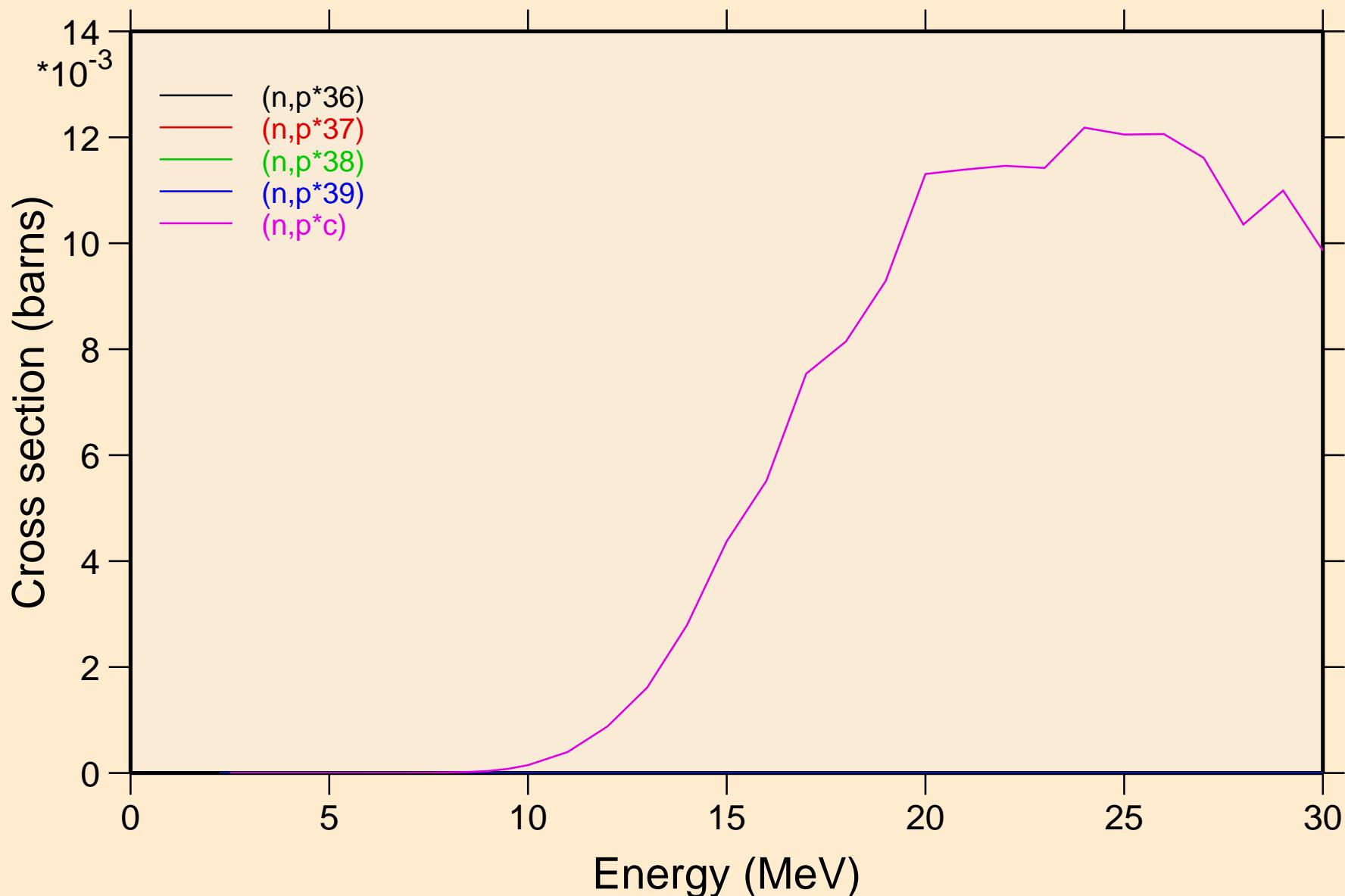
# ADVANCE CALCULATIONS

## Threshold reactions



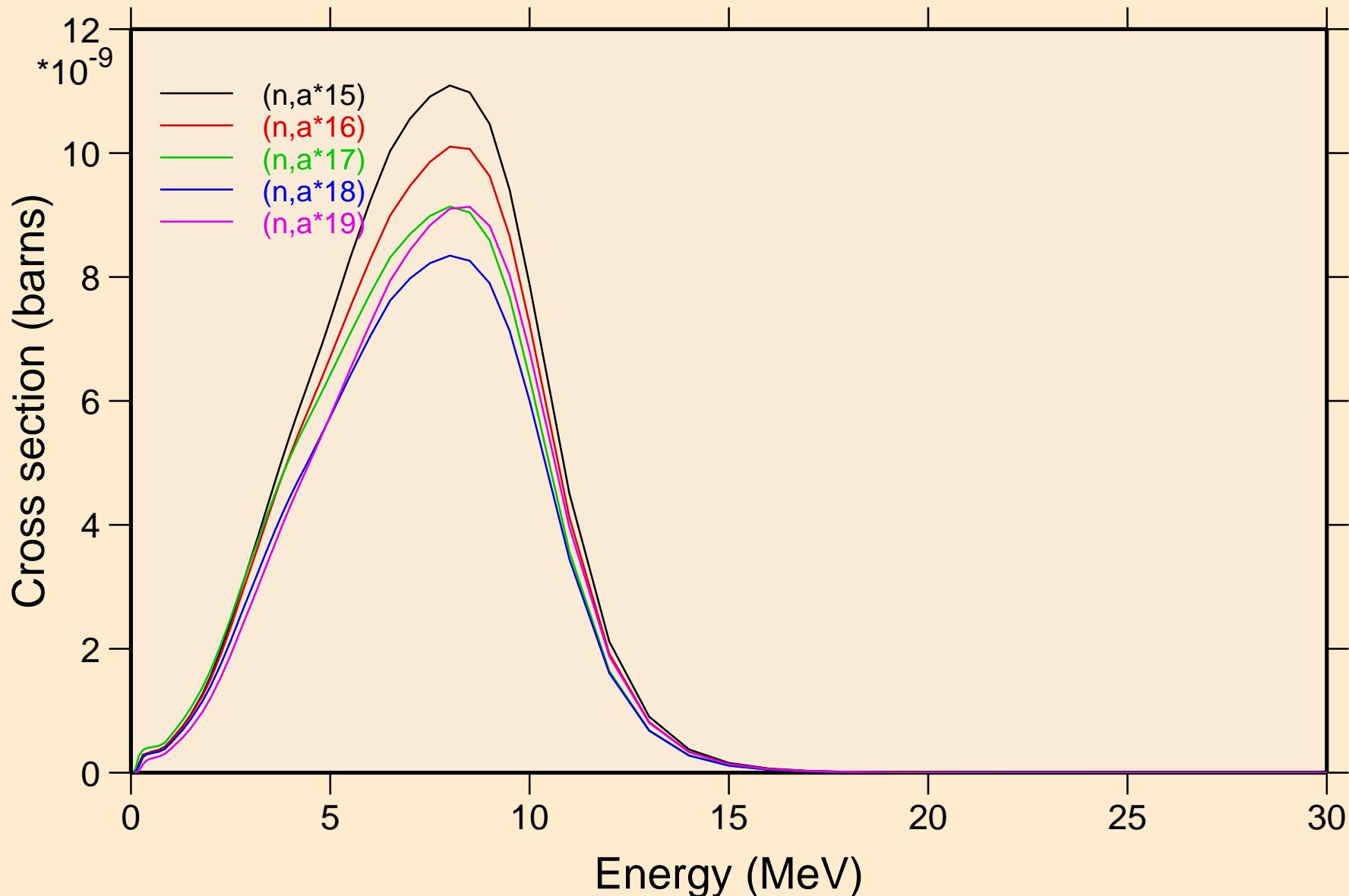
# ADVANCE CALCULATIONS

## Threshold reactions



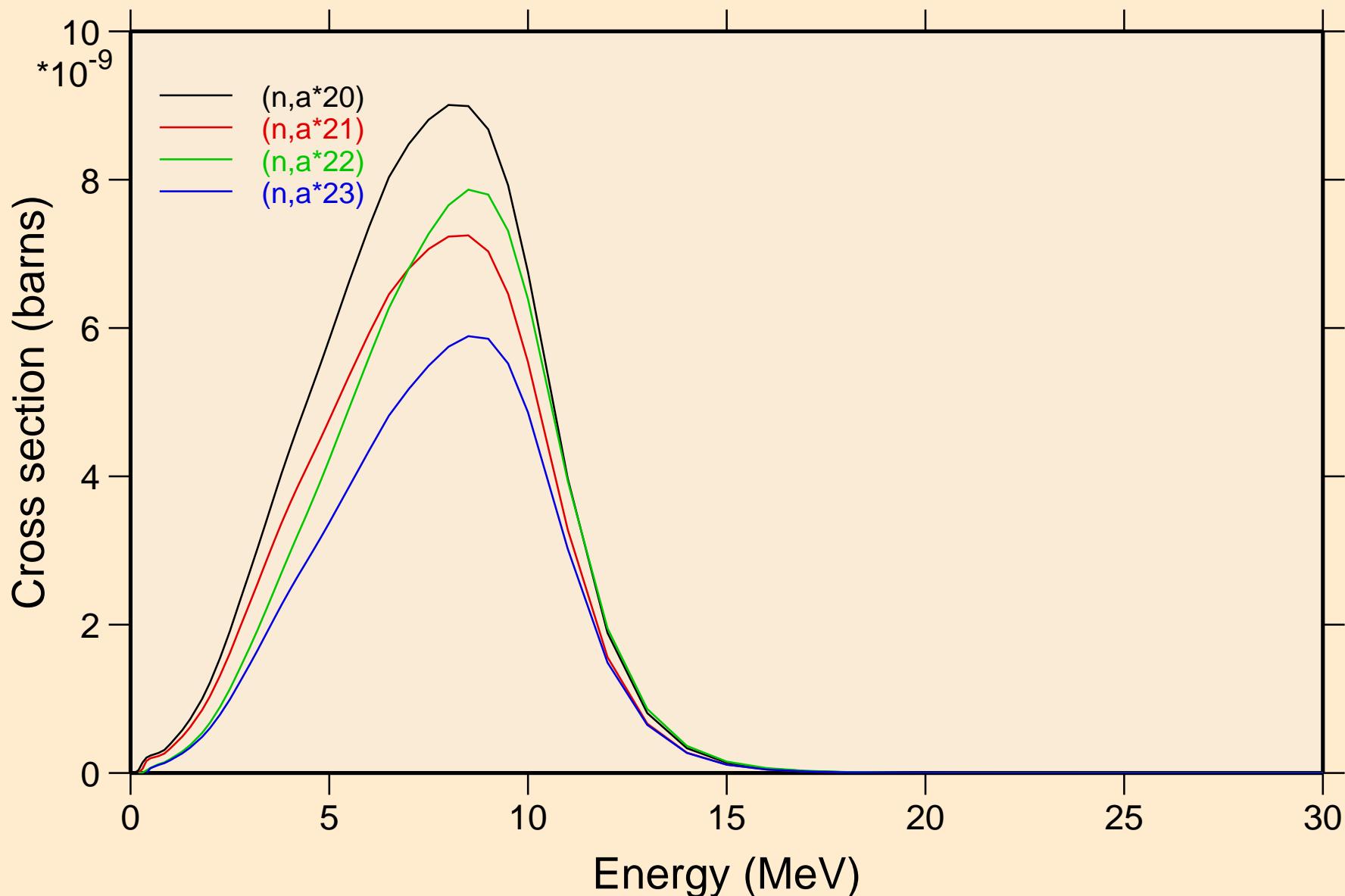
# ADVANCE CALCULATIONS

## Threshold reactions



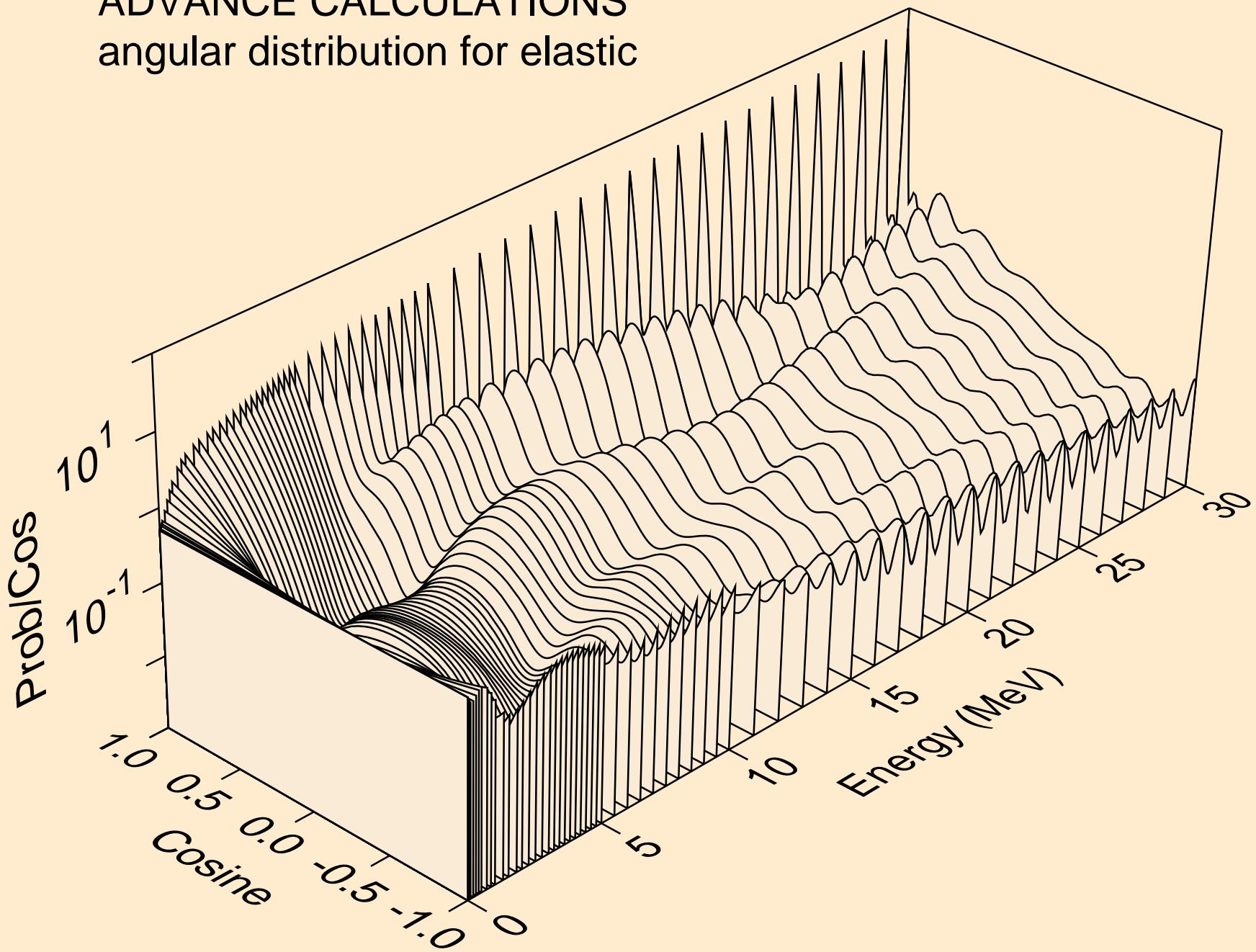
# ADVANCE CALCULATIONS

## Threshold reactions

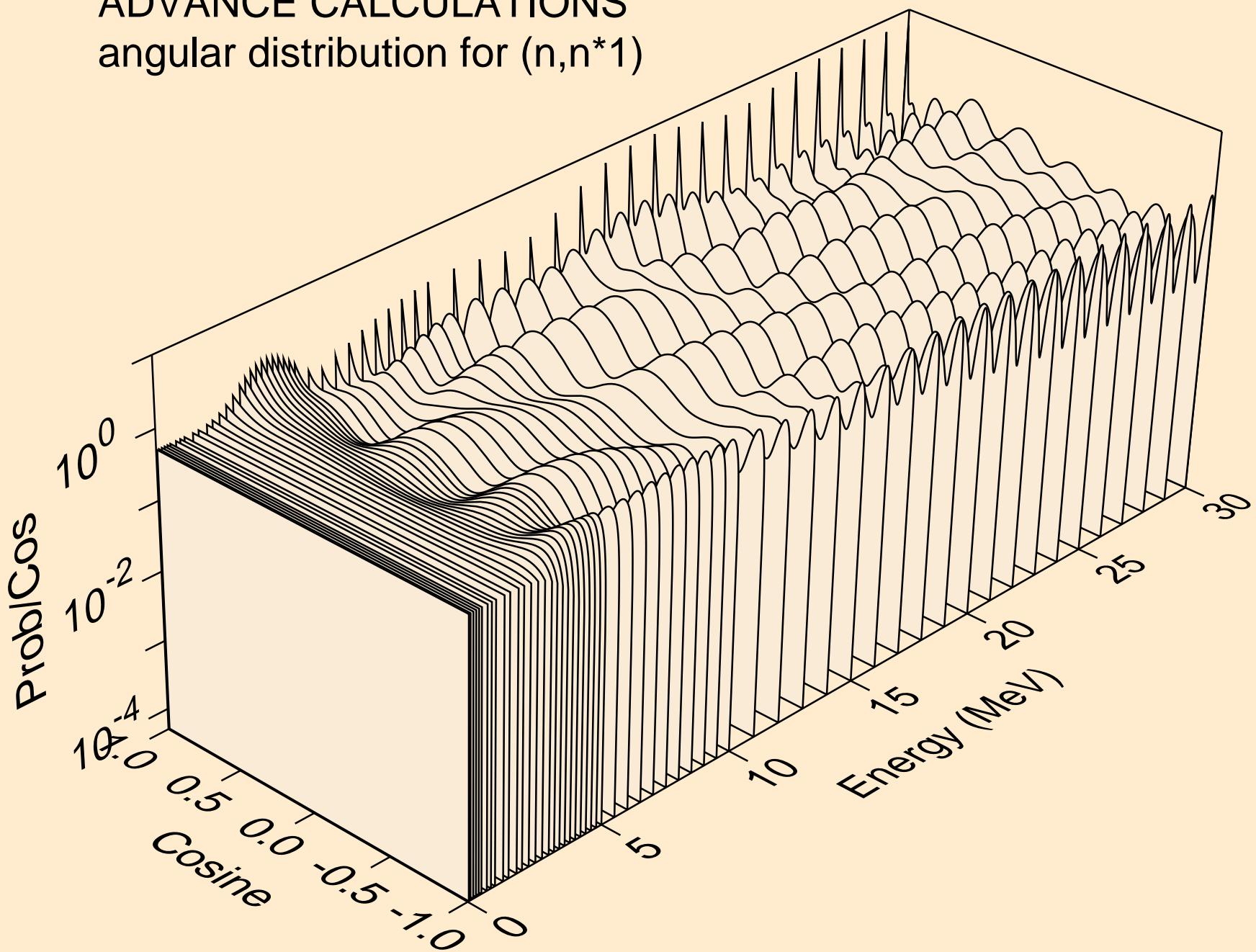


# ADVANCE CALCULATIONS

angular distribution for elastic

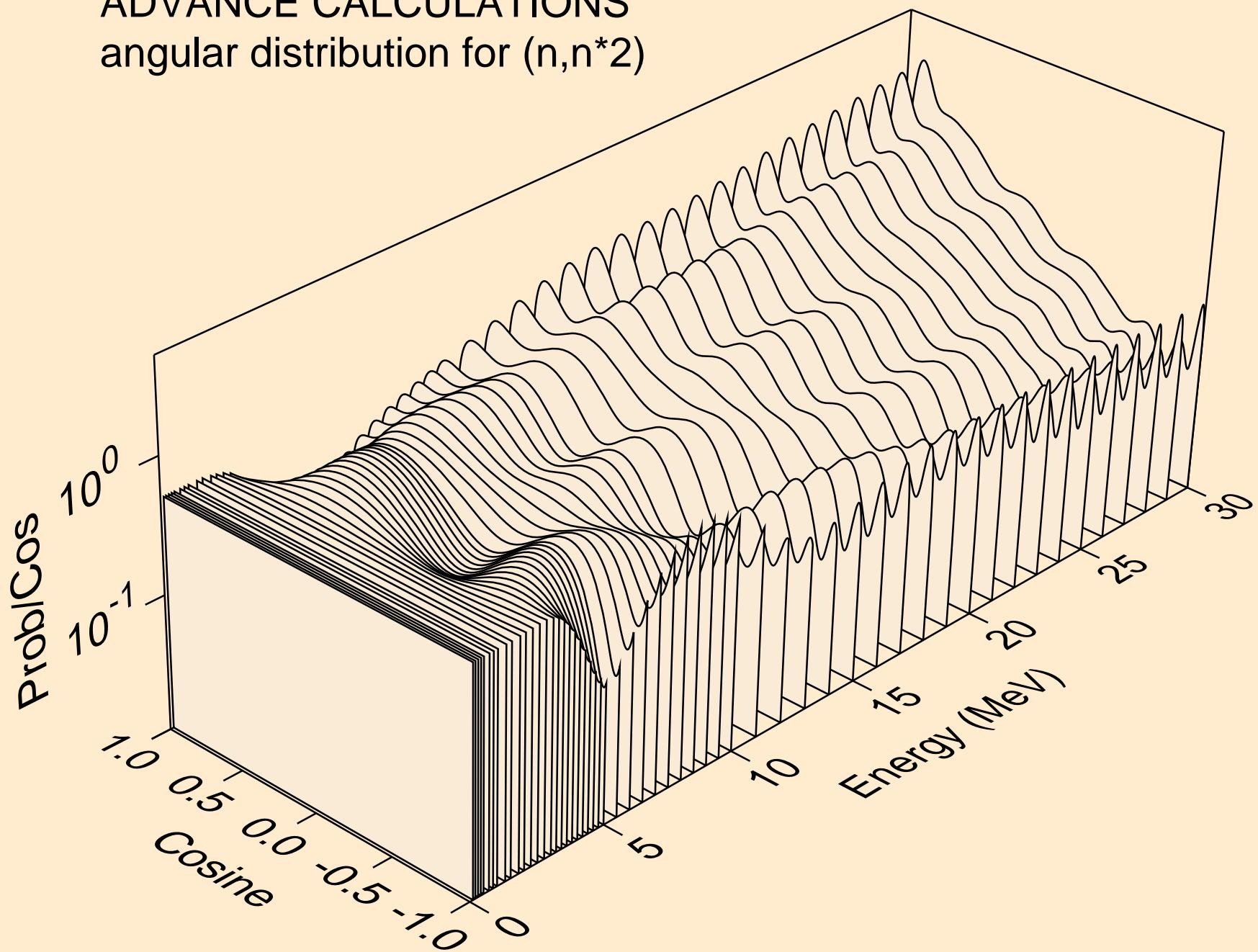


ADVANCE CALCULATIONS  
angular distribution for (n,n\*1)



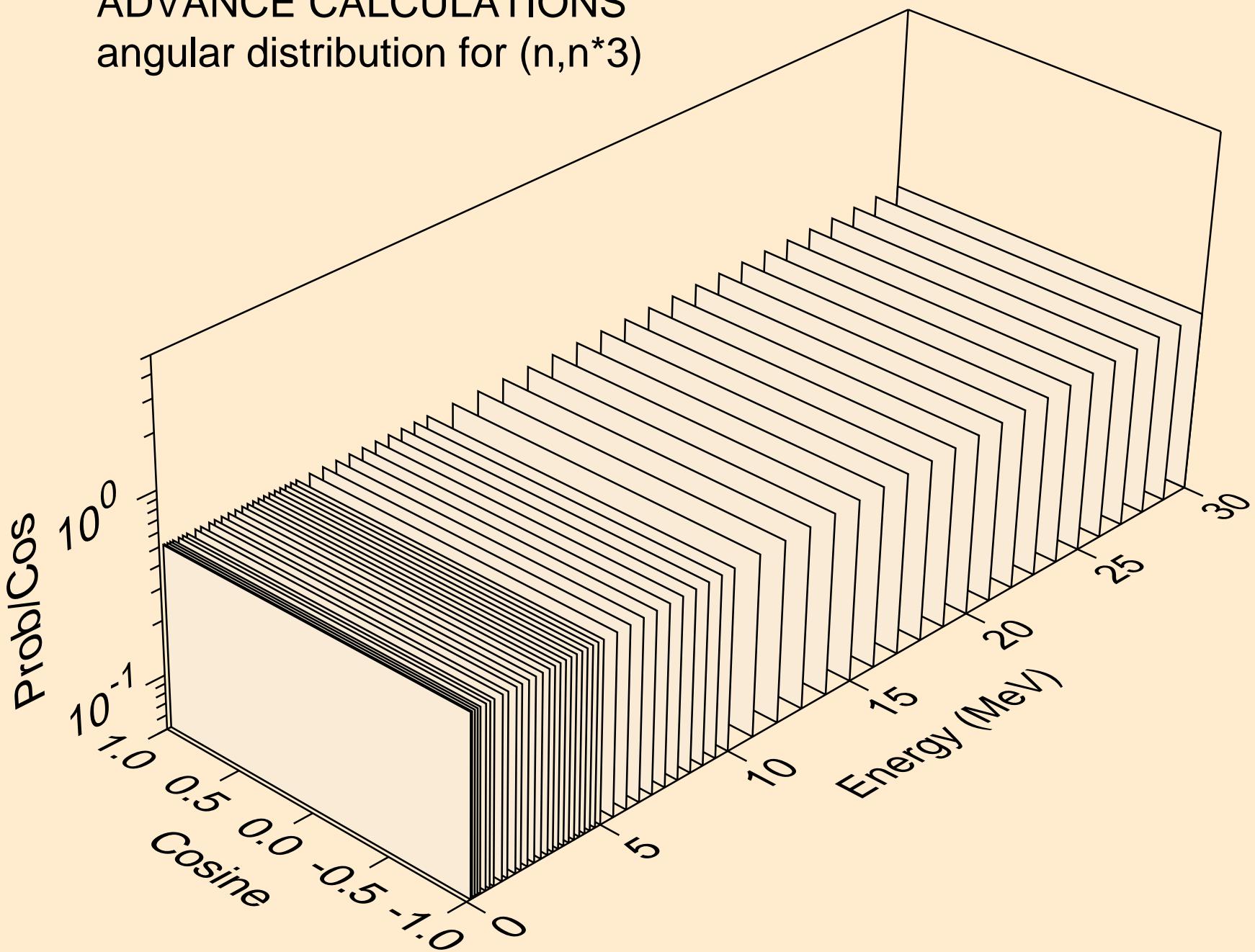
# ADVANCE CALCULATIONS

angular distribution for  $(n, n^*)^2$

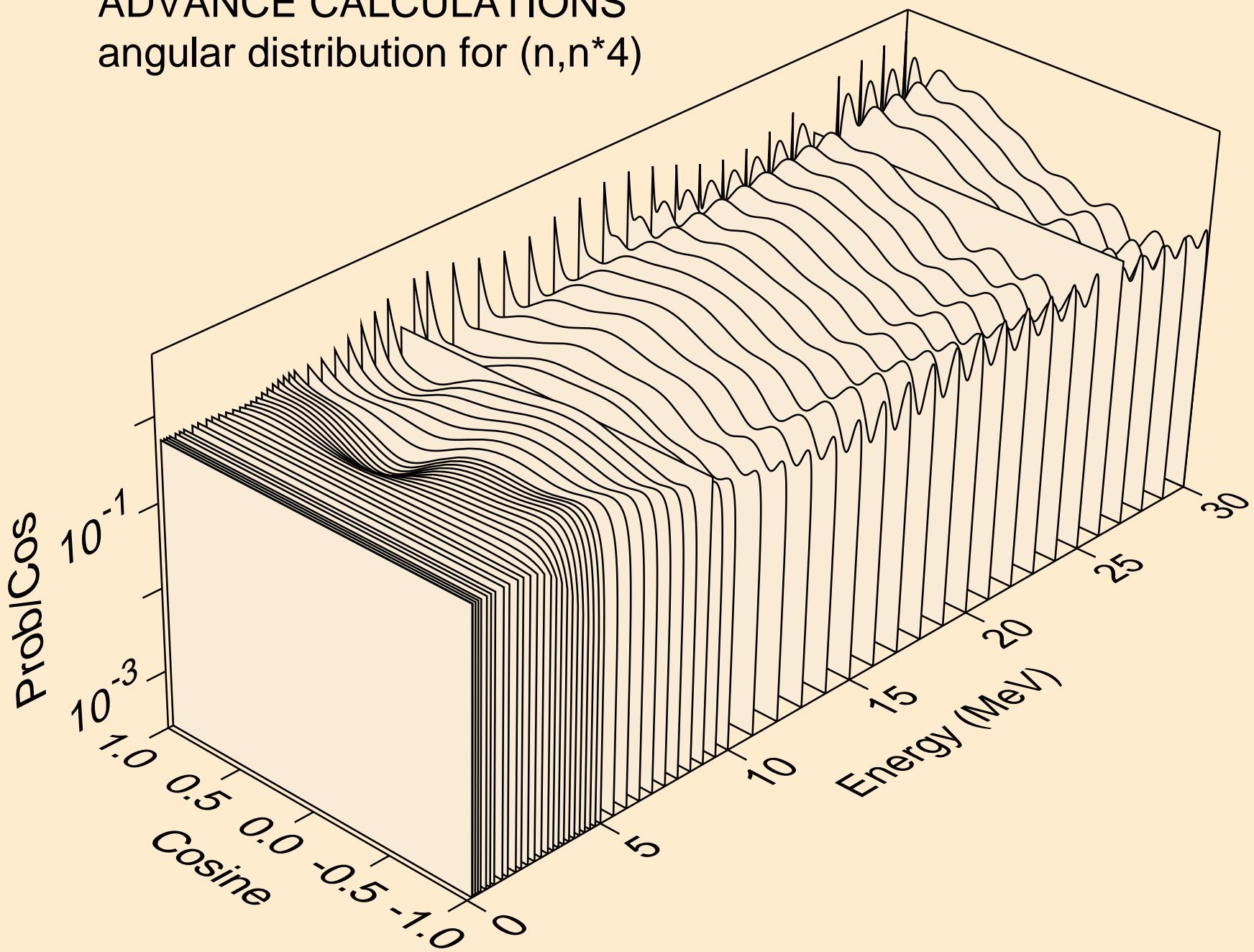


# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)^3$

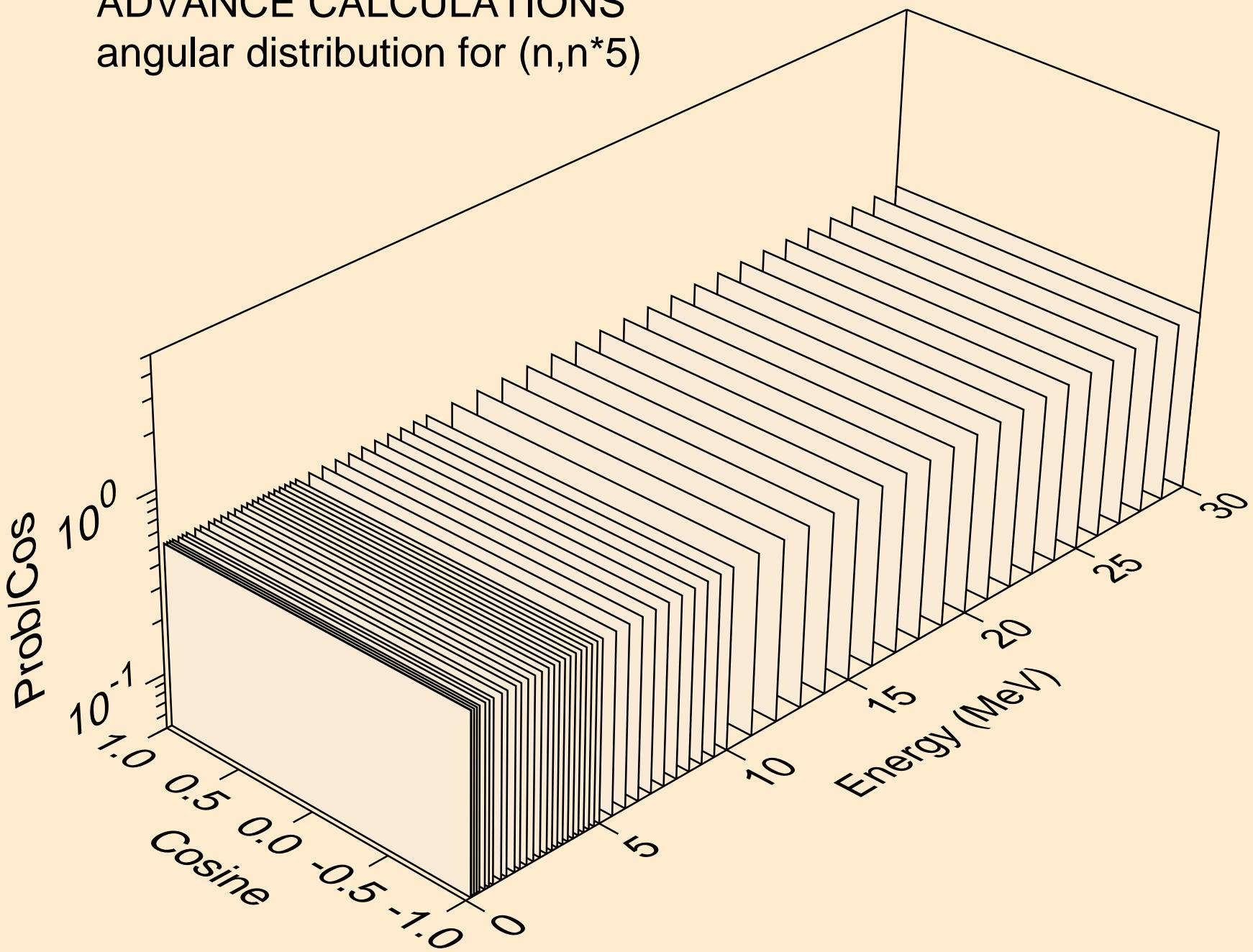


ADVANCE CALCULATIONS  
angular distribution for  $(n,n^*)^4$



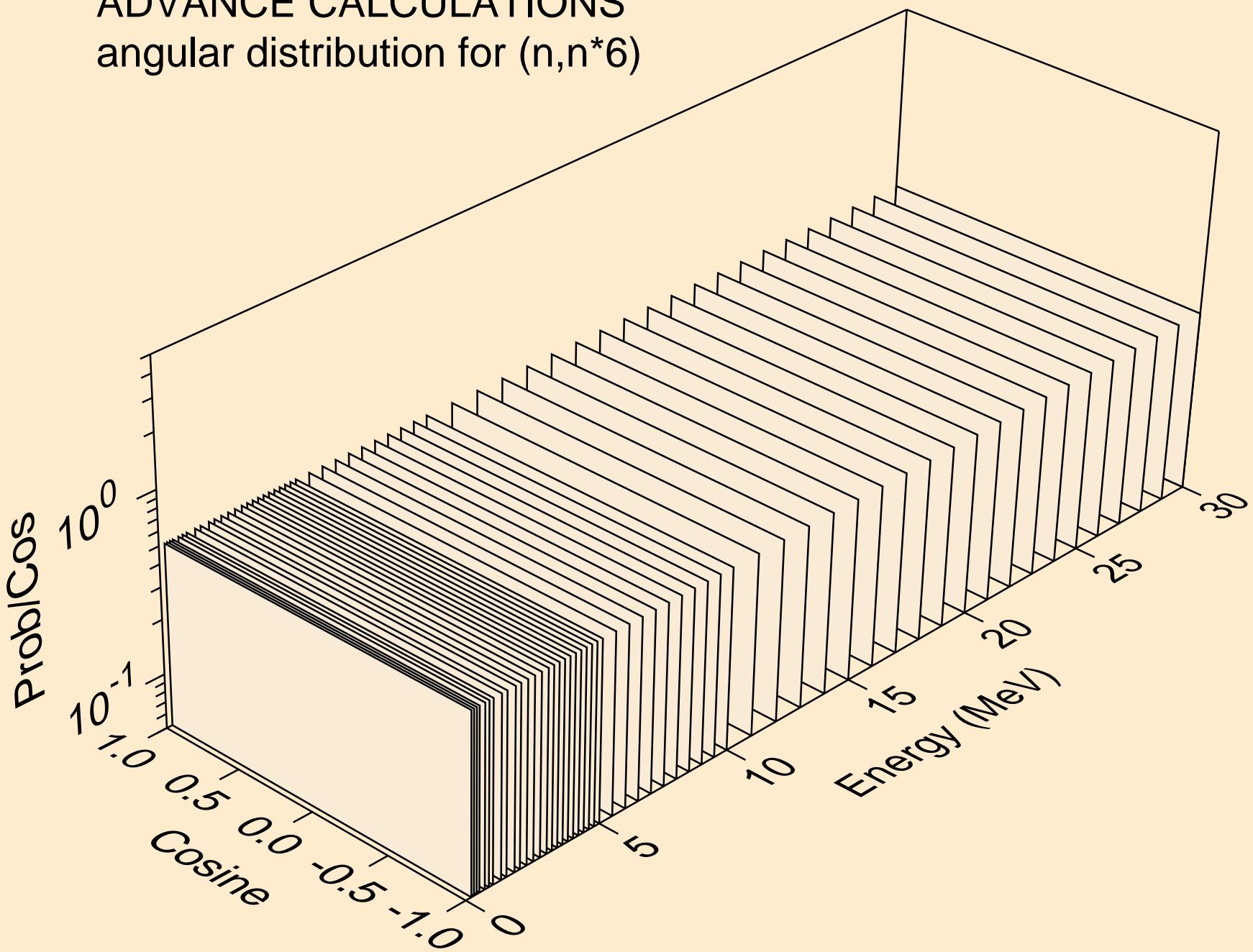
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)$



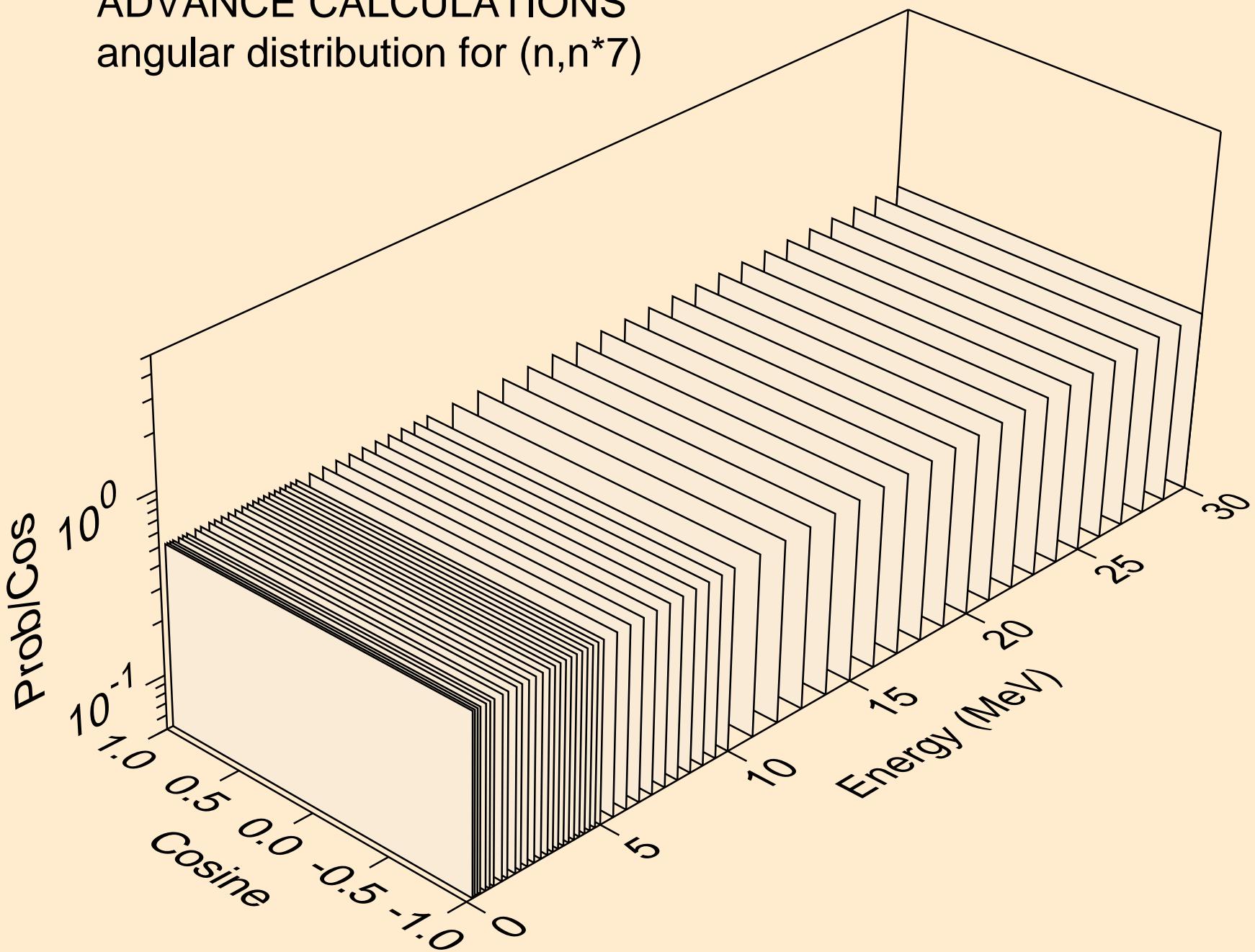
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*6)$



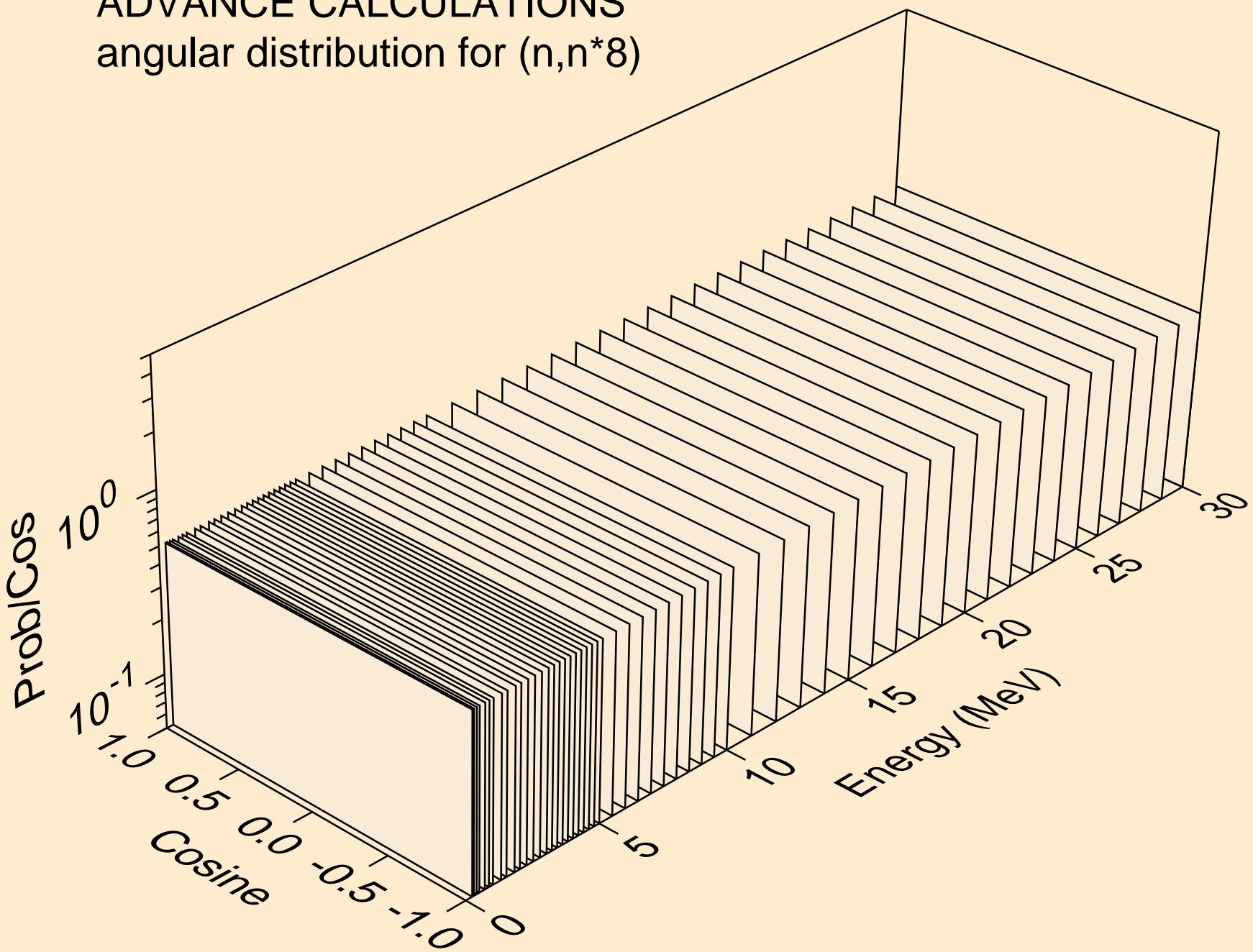
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)^7$



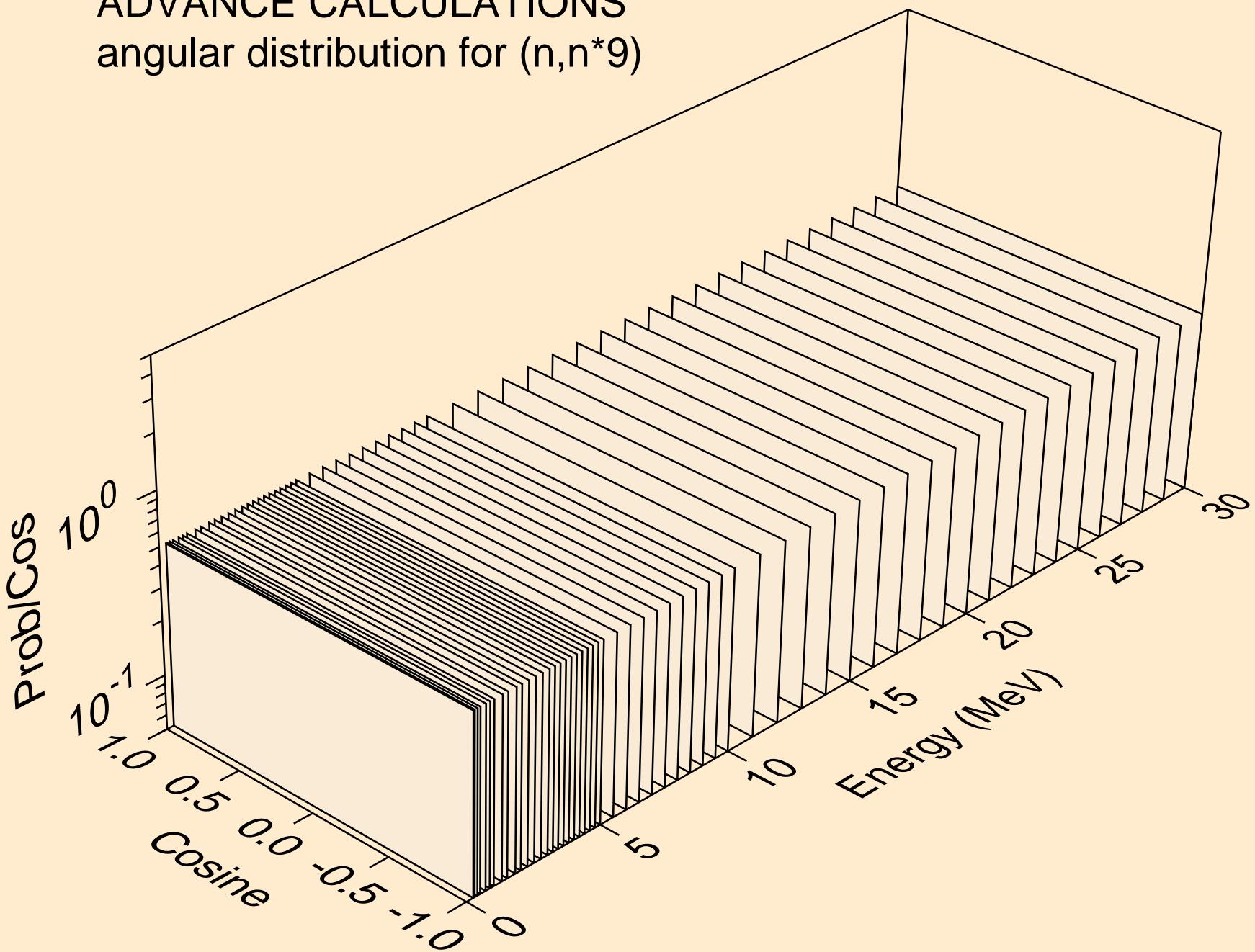
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)^8$



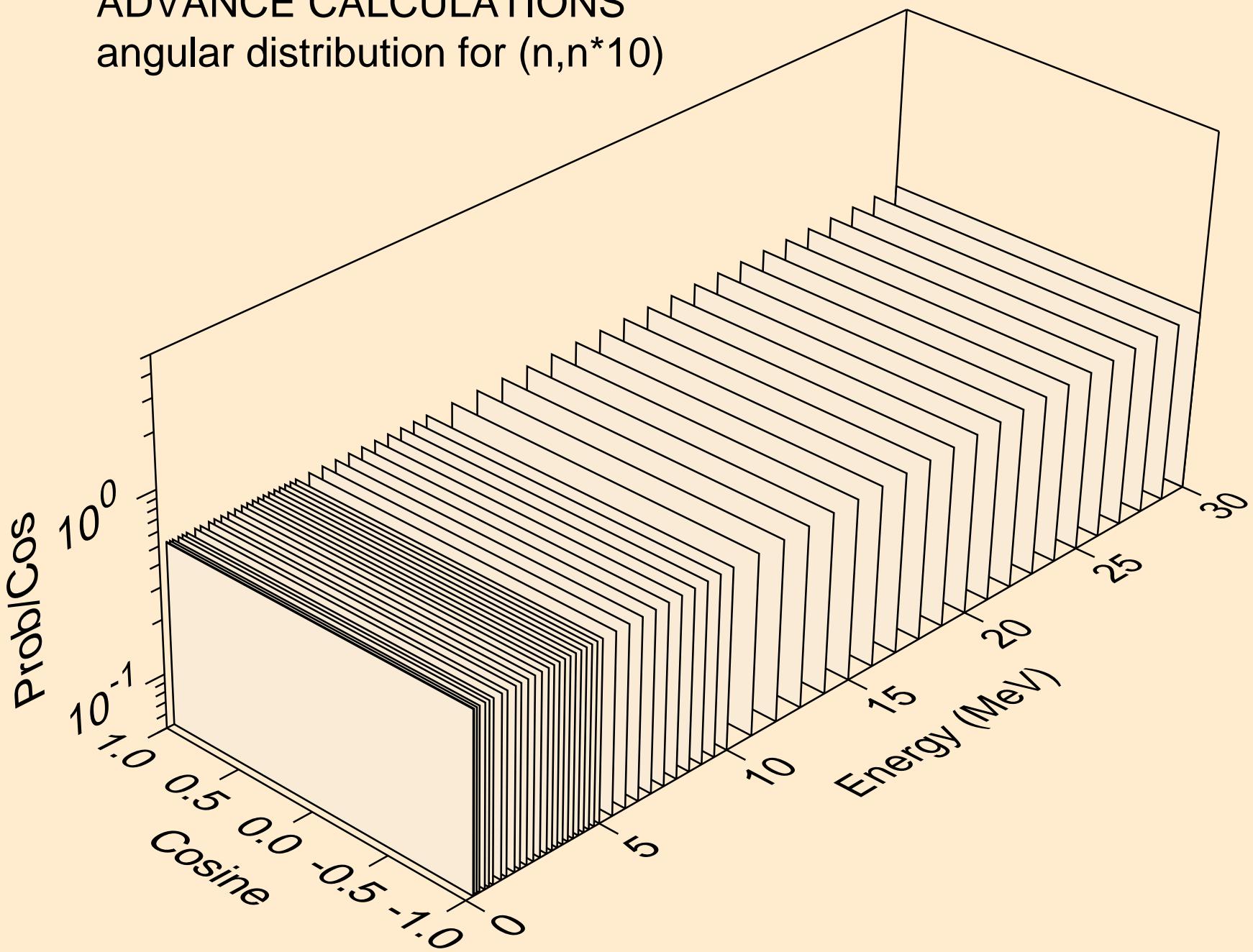
# ADVANCE CALCULATIONS

## angular distribution for $(n,n^*)$



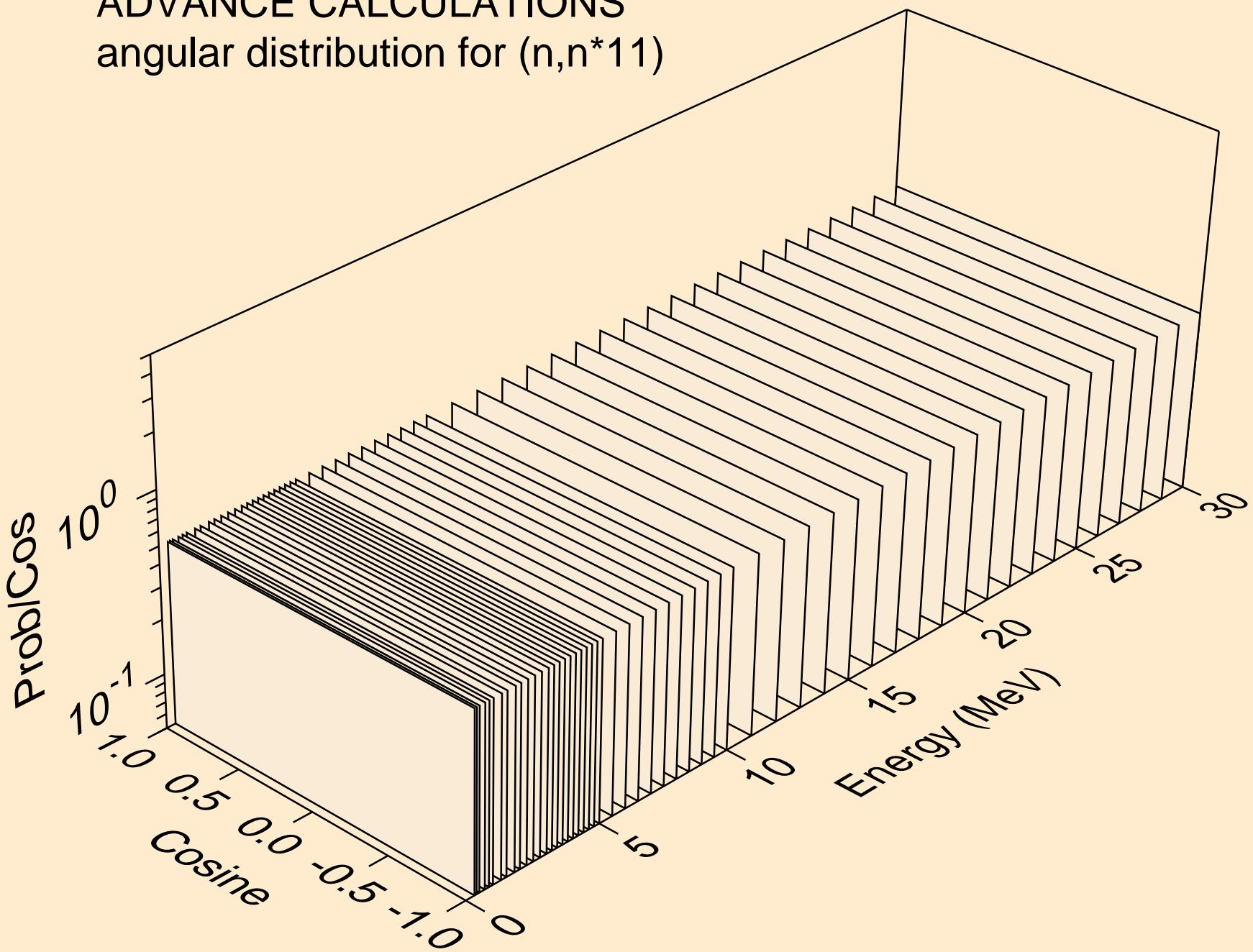
# ADVANCE CALCULATIONS

angular distribution for (n,n\*10)



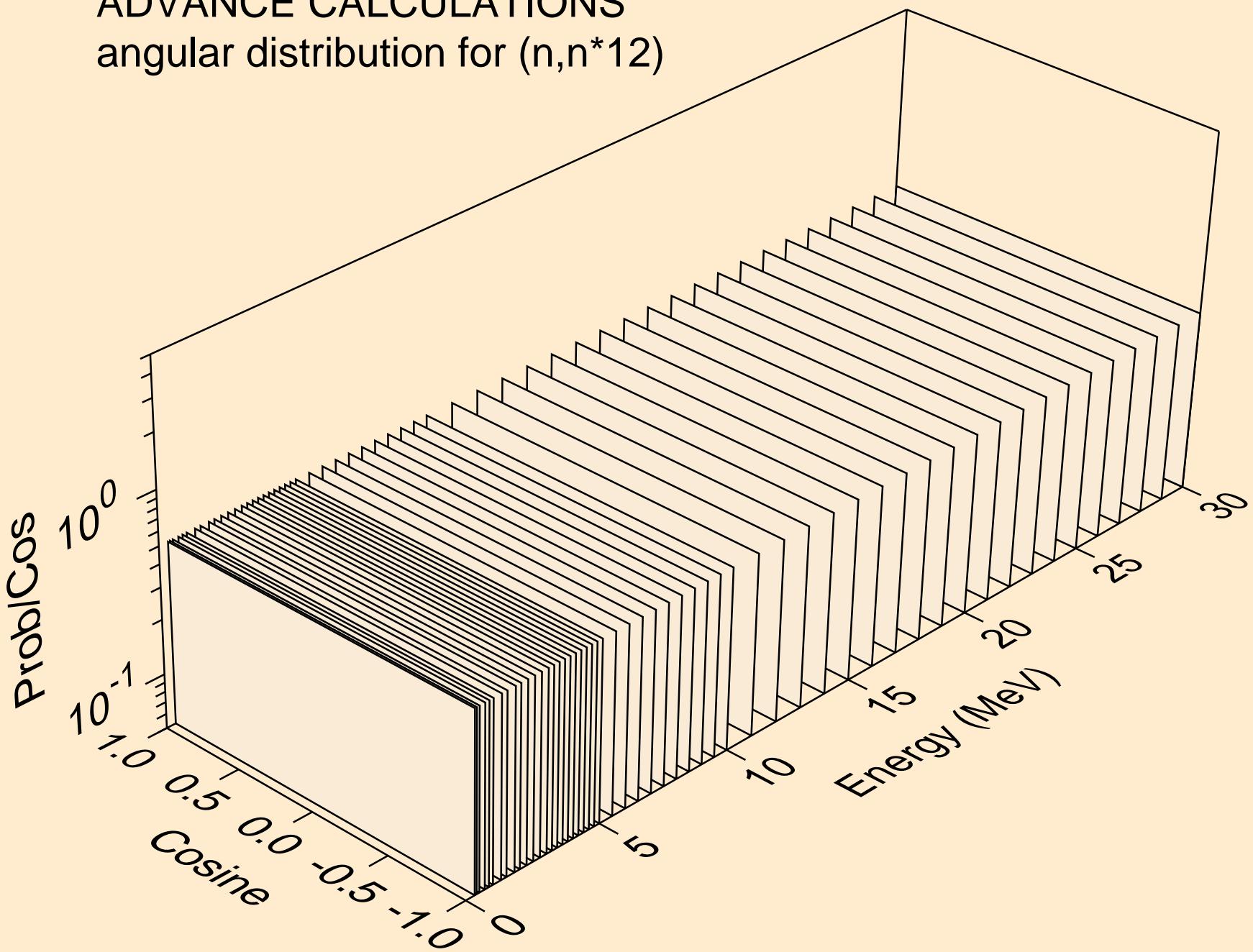
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*11)



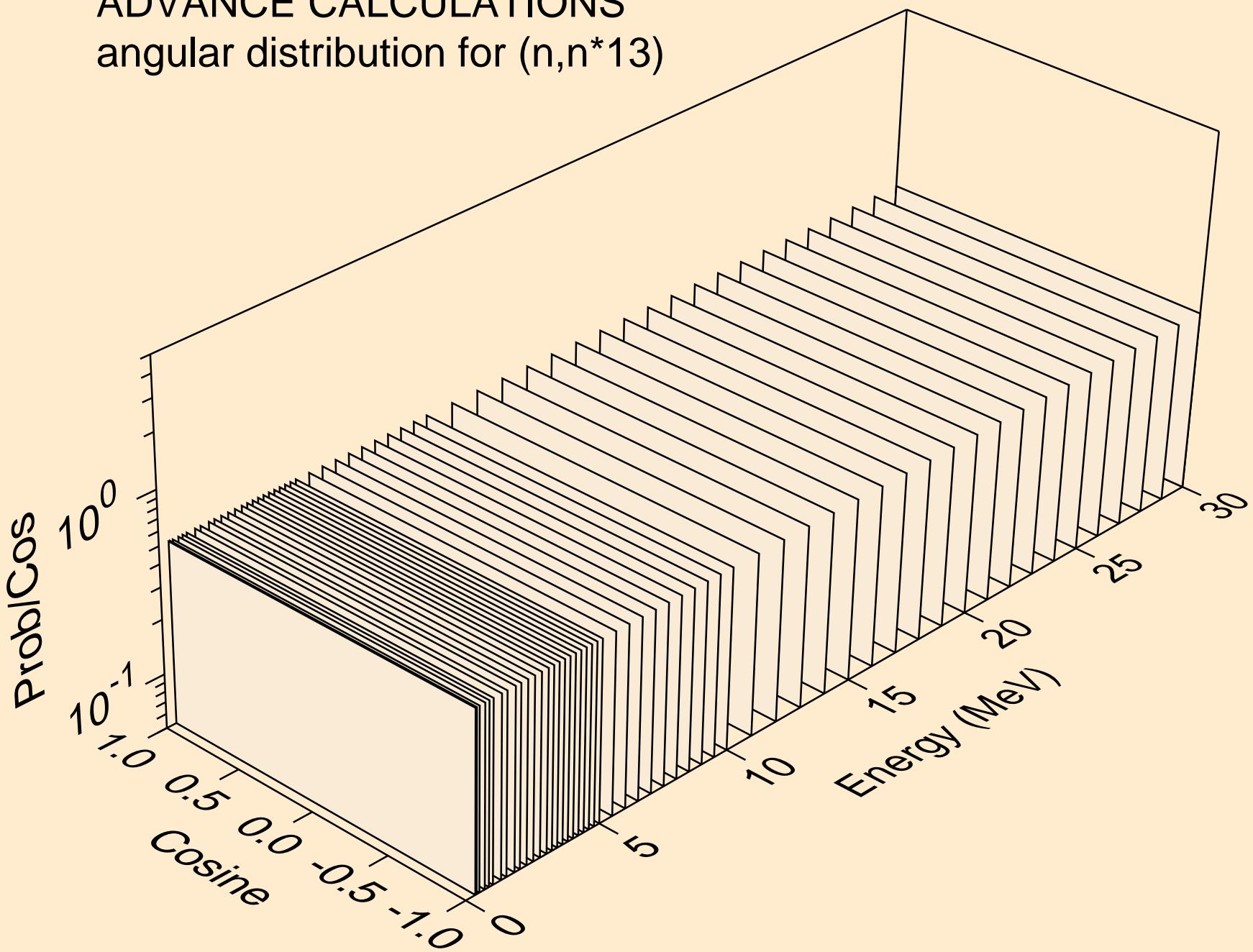
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*12)$



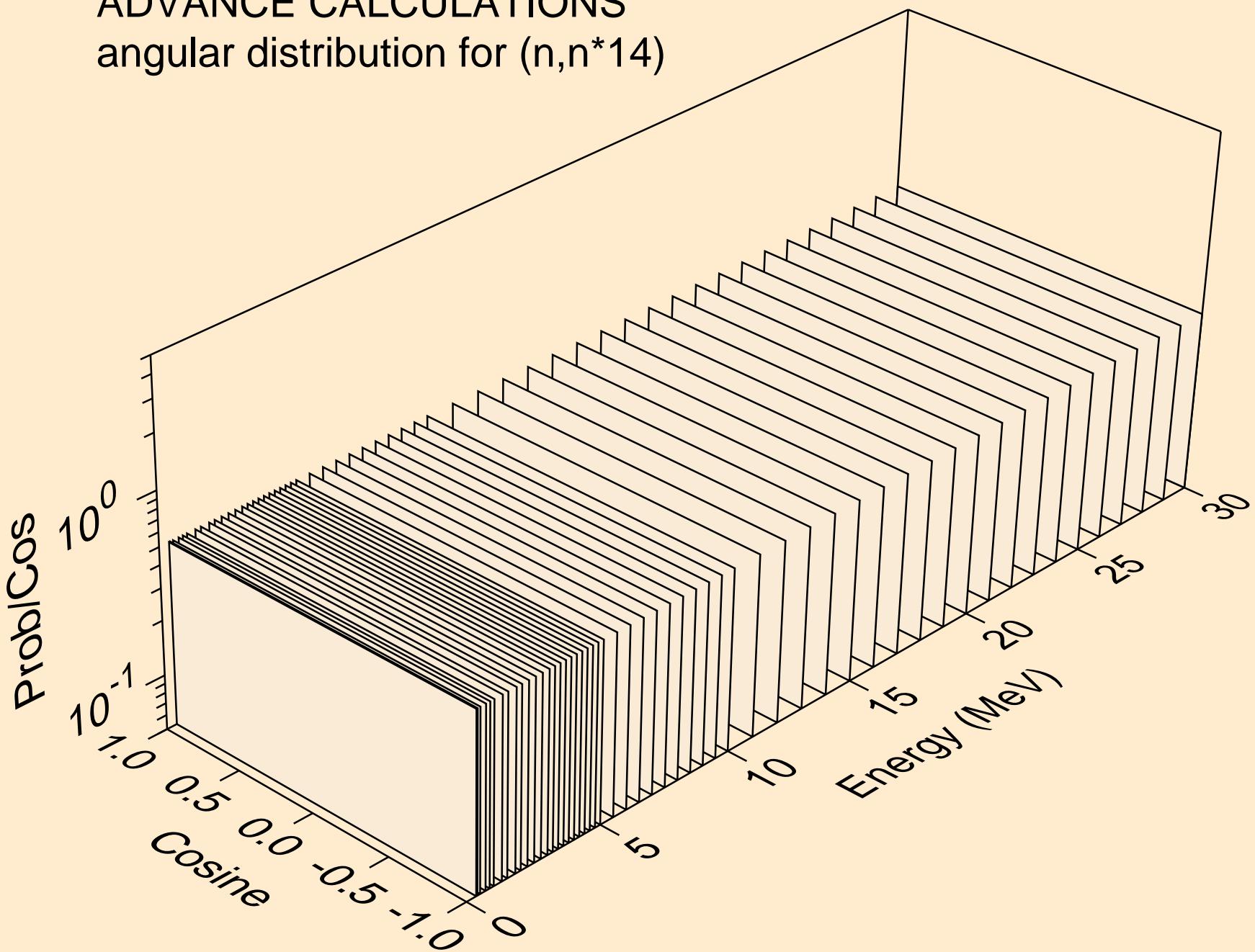
# ADVANCE CALCULATIONS

angular distribution for (n,n\*13)



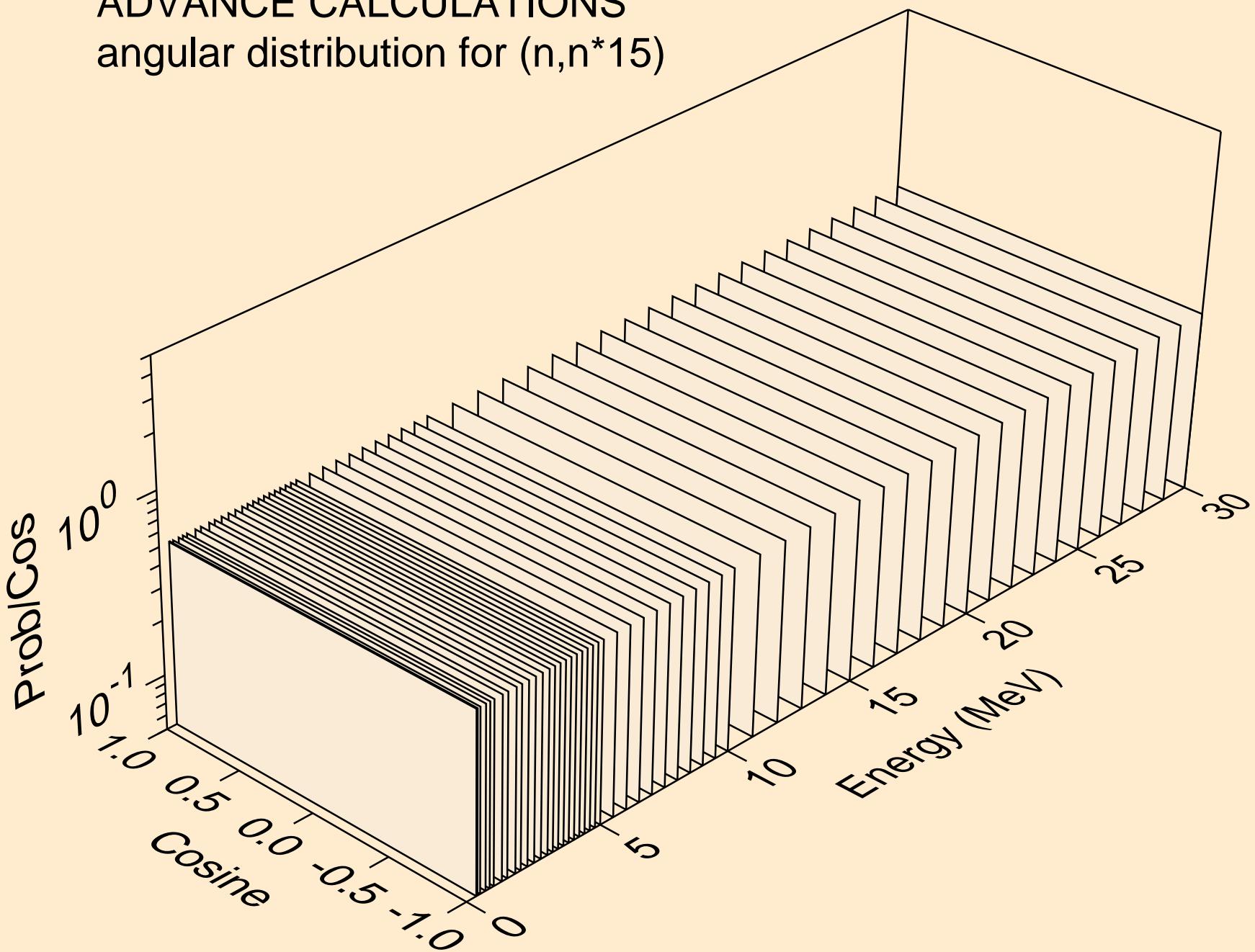
# ADVANCE CALCULATIONS

## angular distribution for ( $n, n^* 14$ )



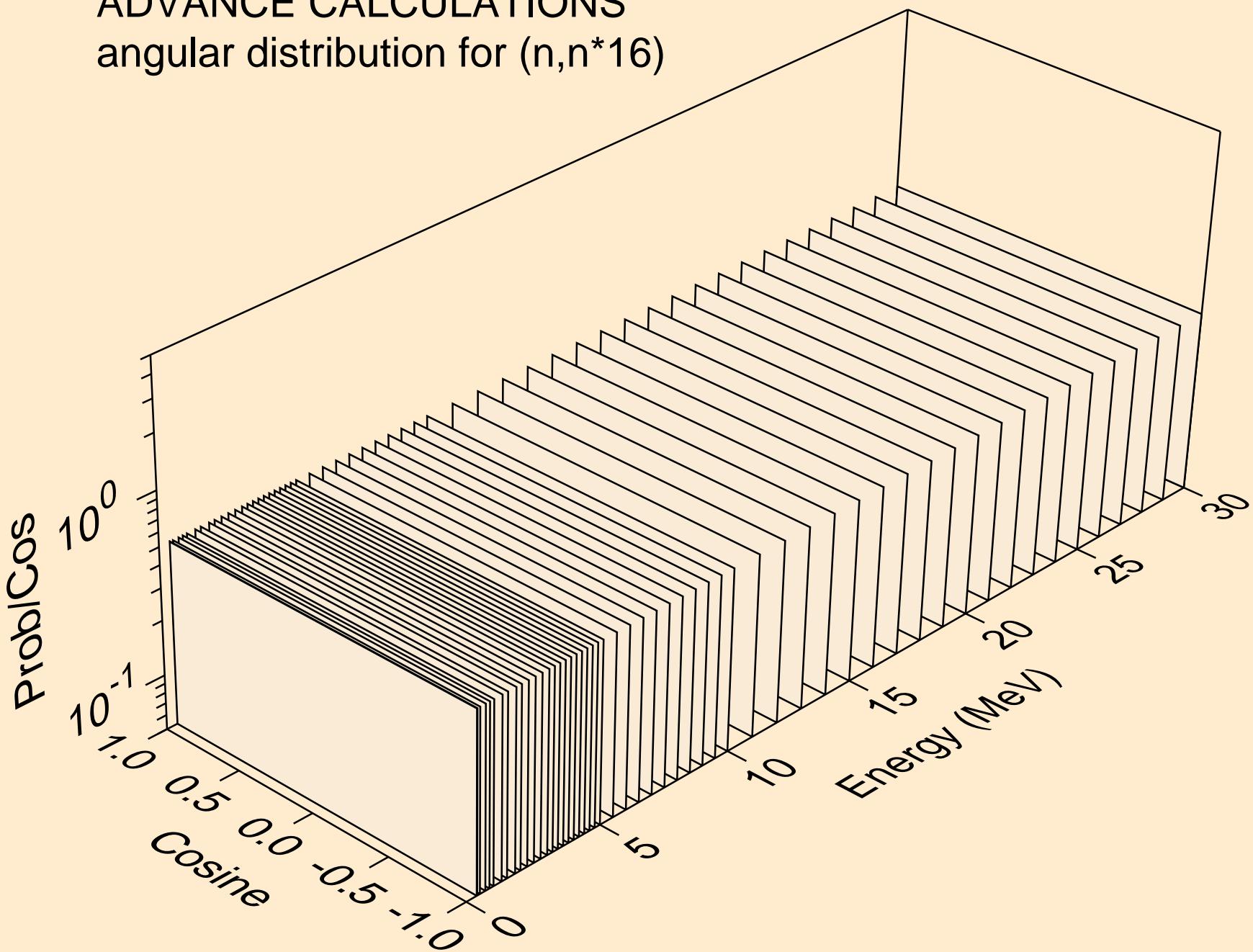
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*15)$



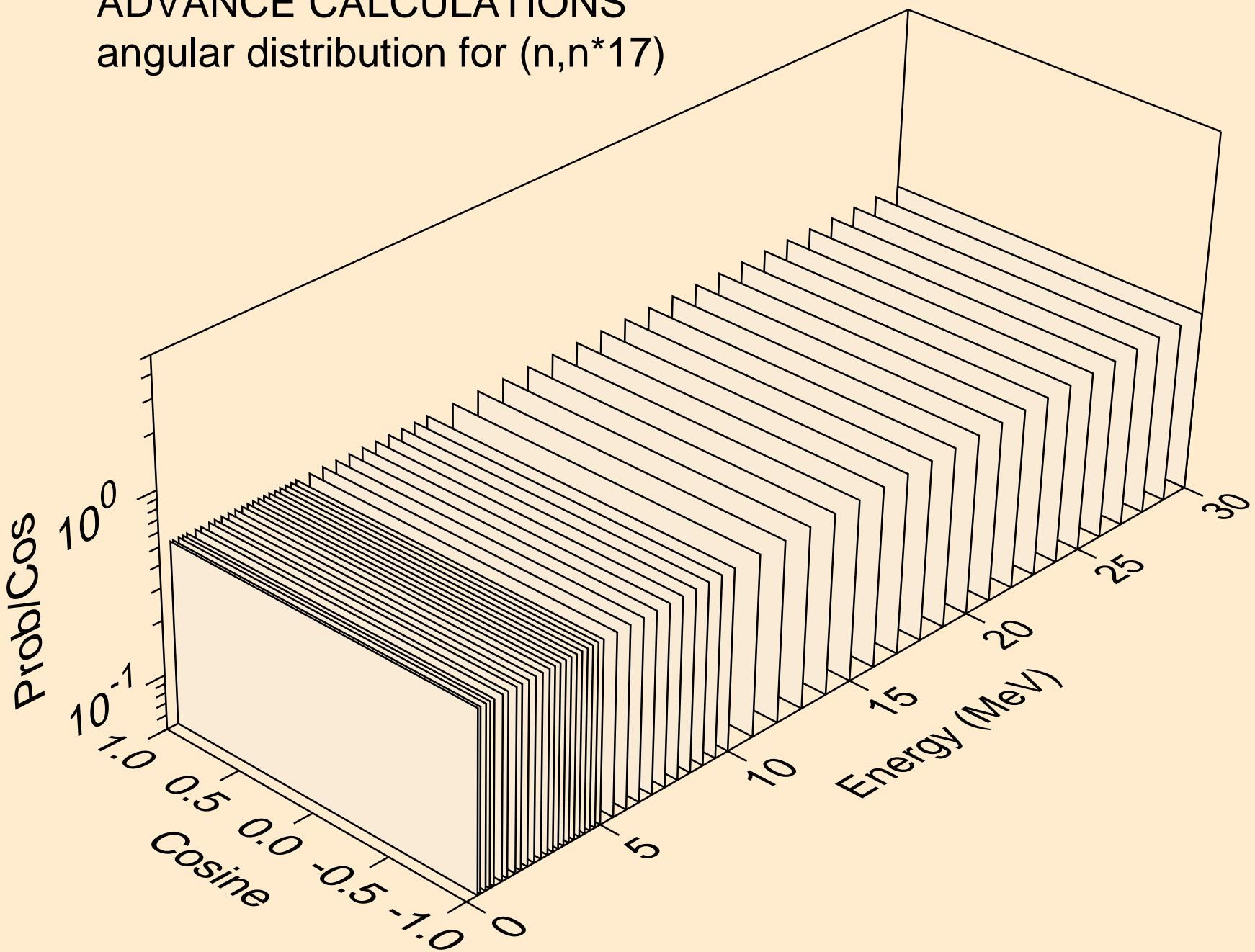
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*16)



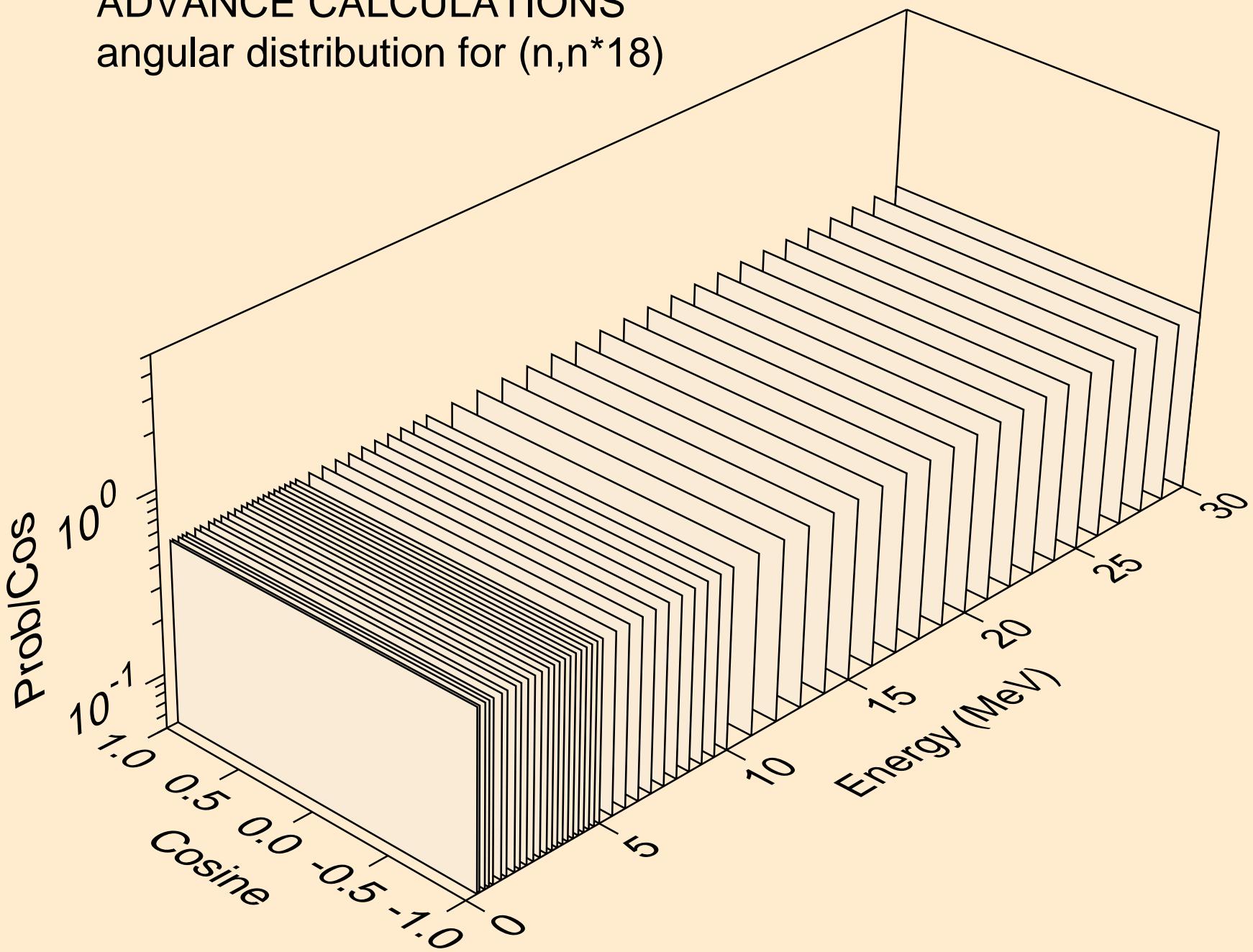
# ADVANCE CALCULATIONS

## angular distribution for ( $n, n^*17$ )



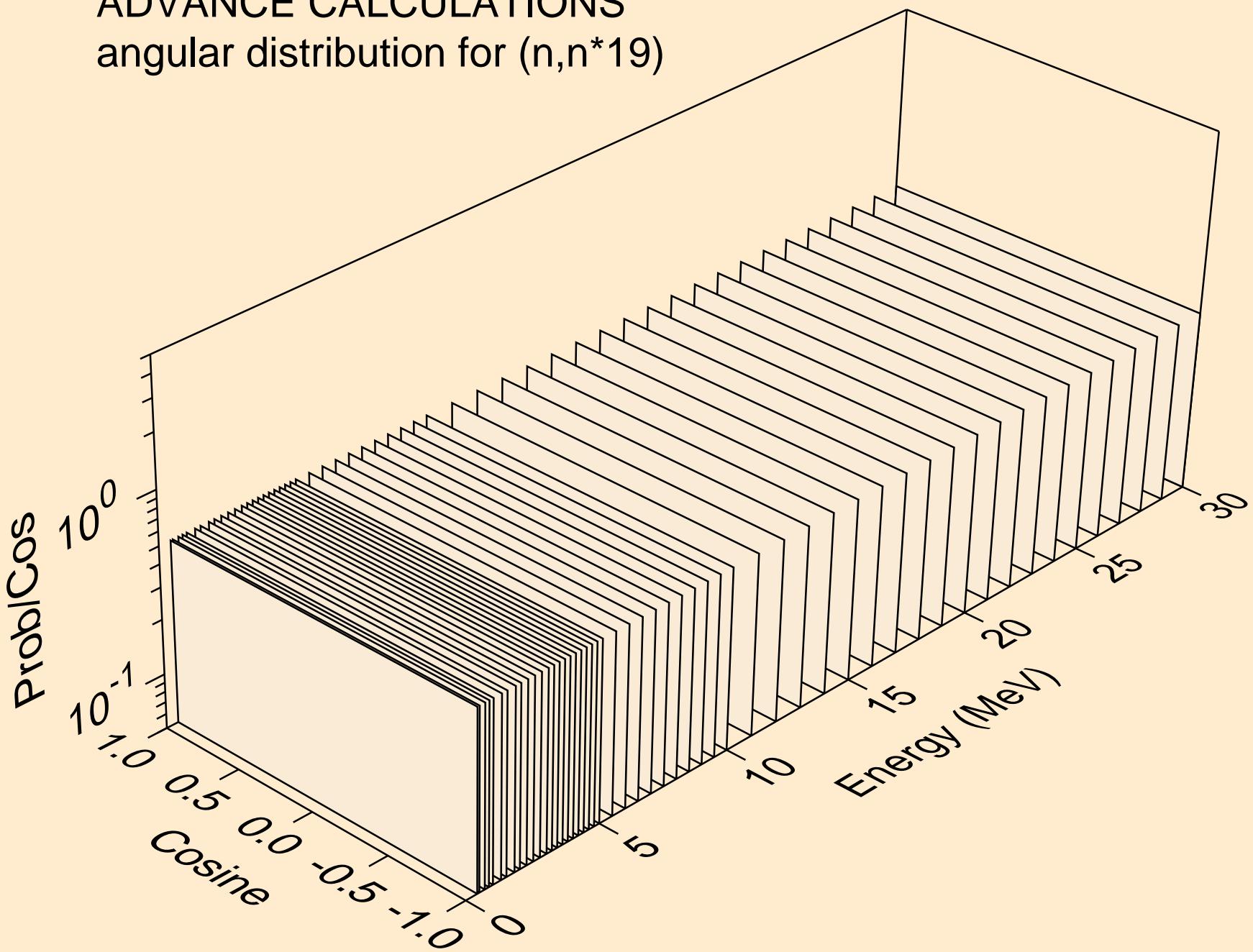
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^{*}18)$



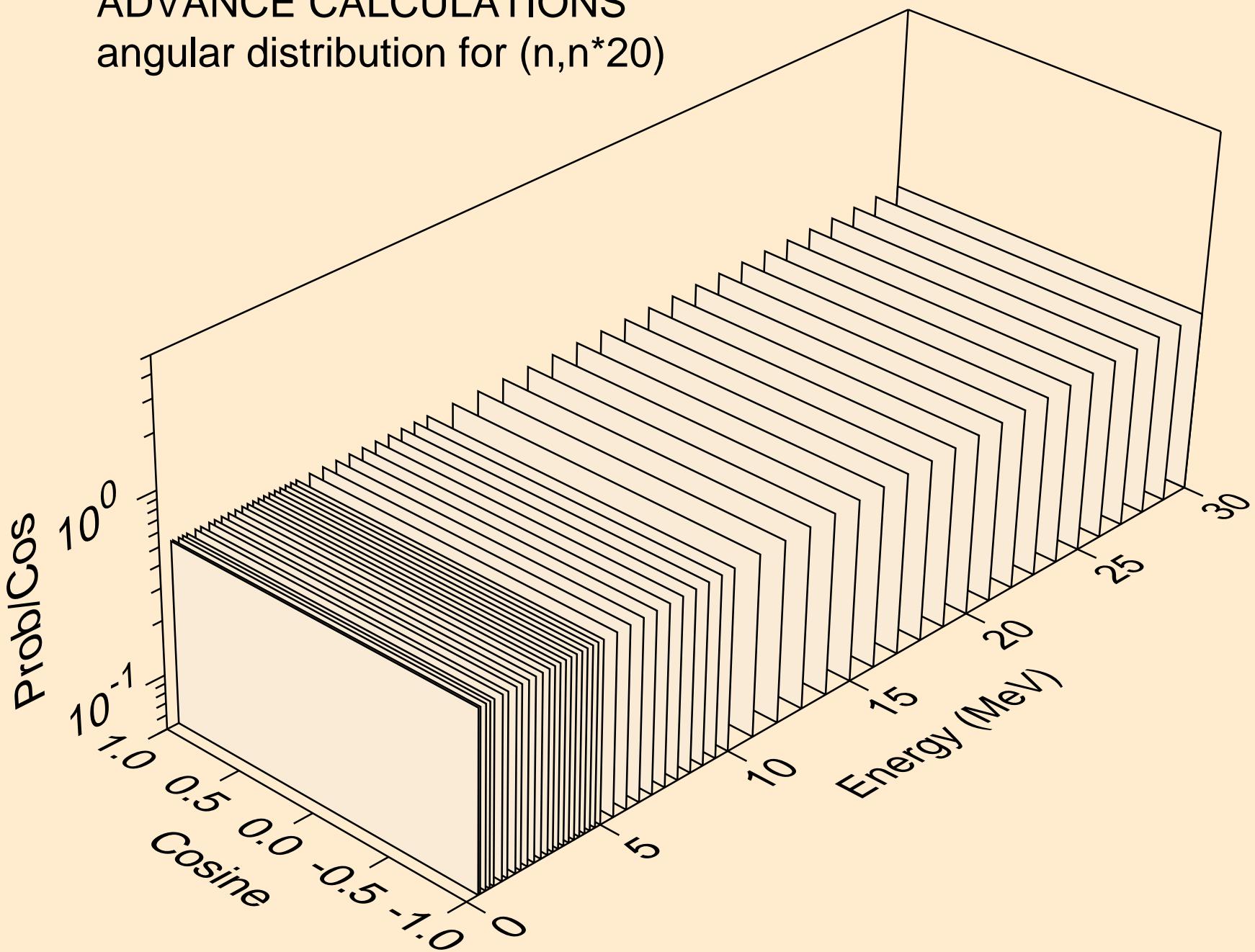
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*19)



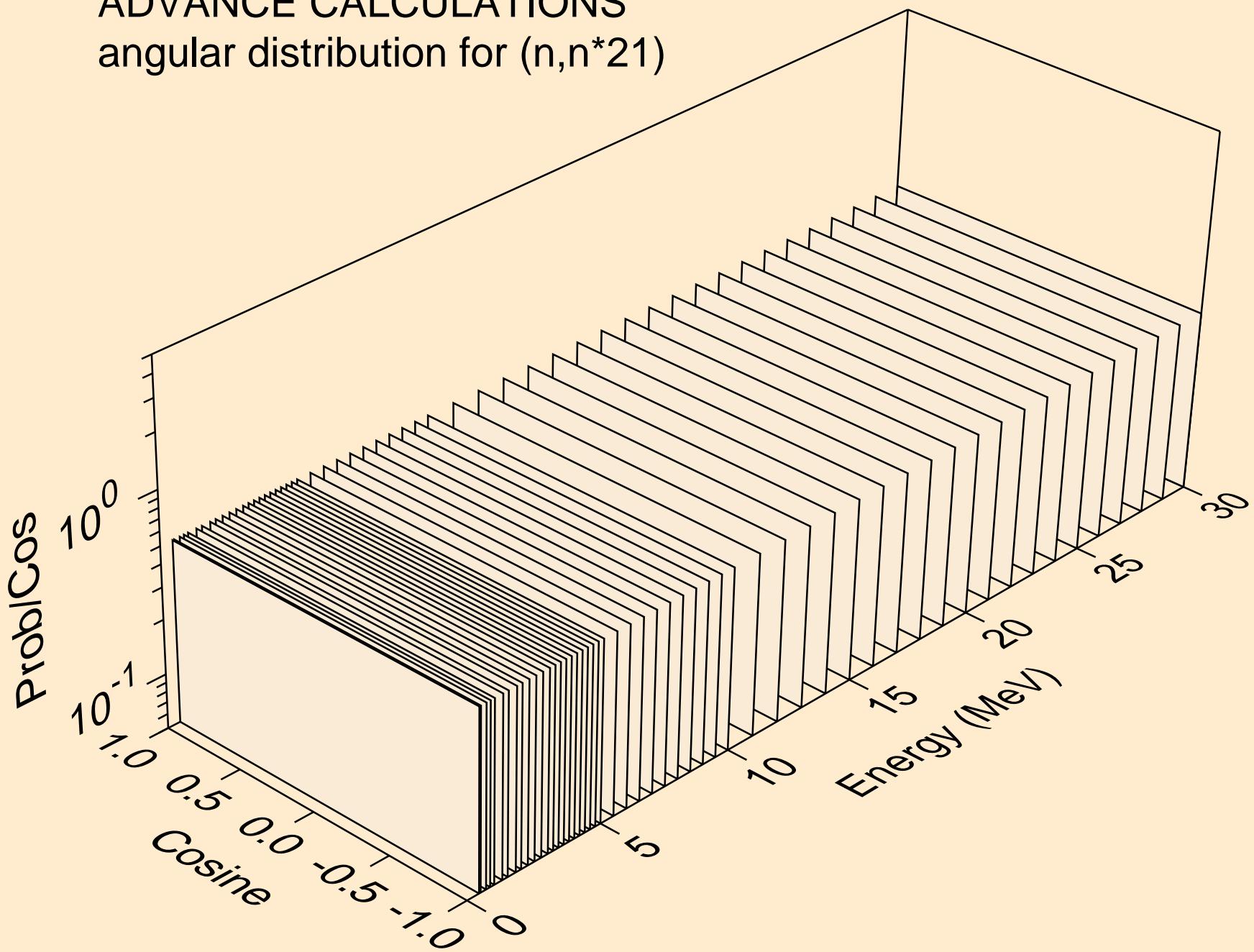
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)20$



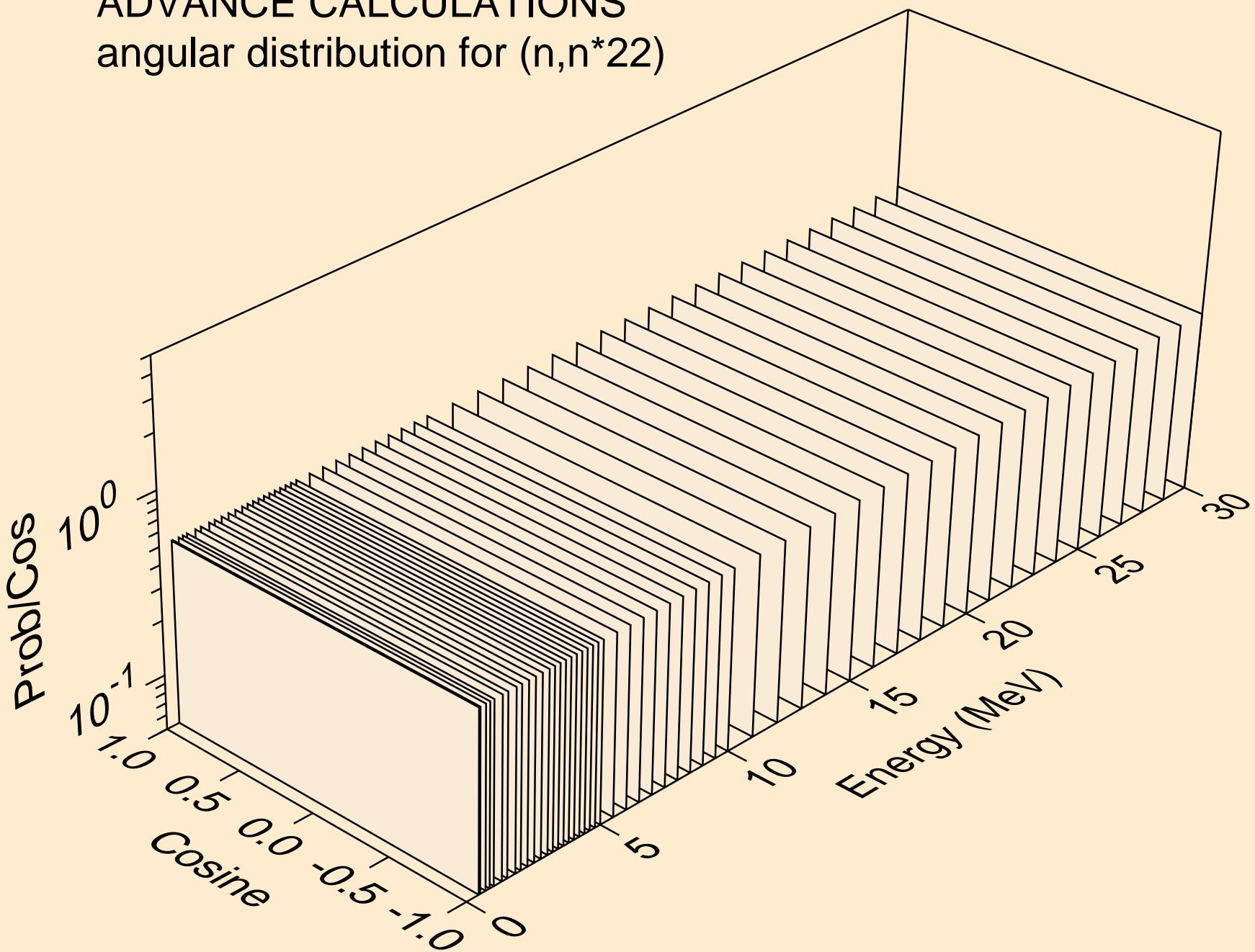
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*21)$



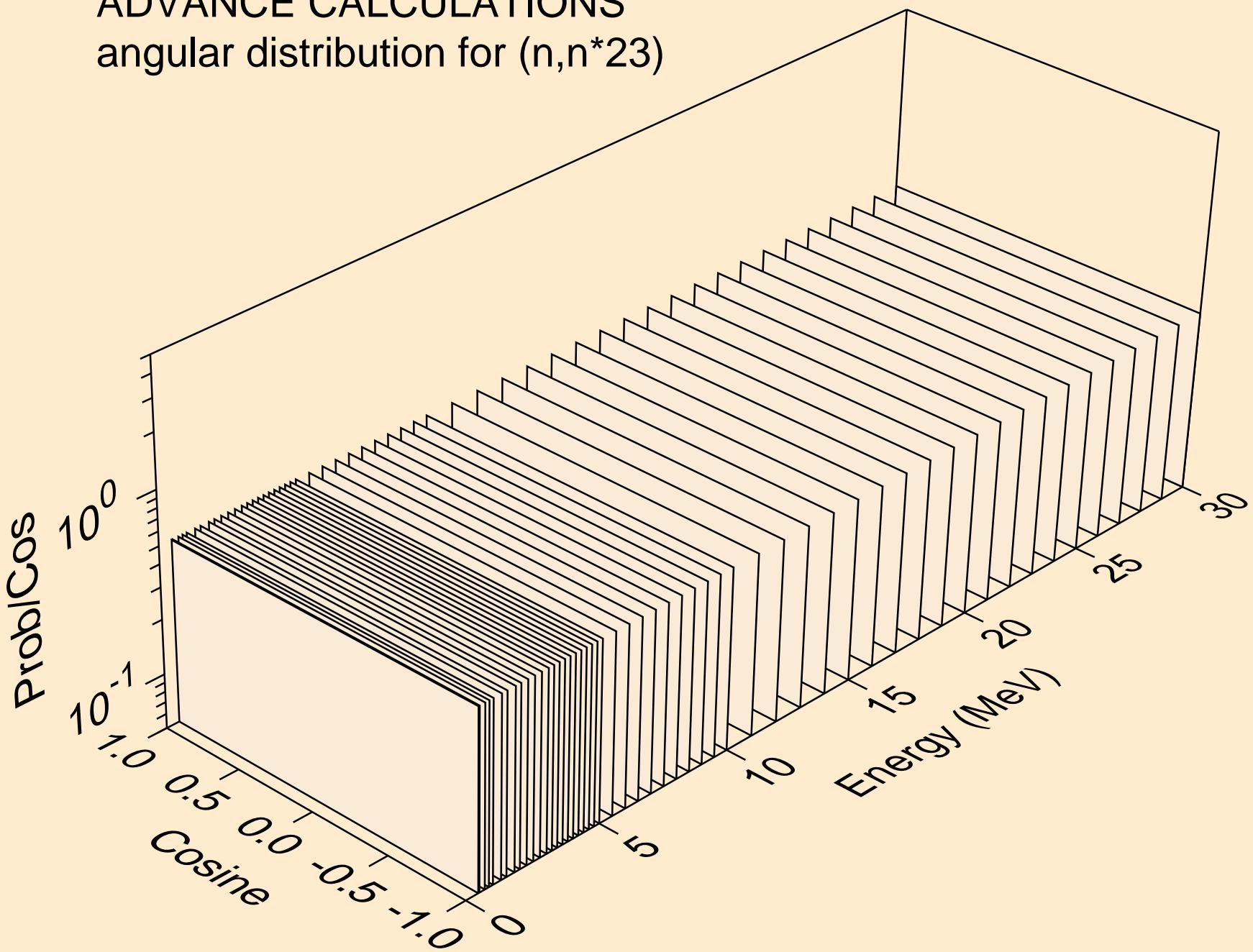
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*22)$



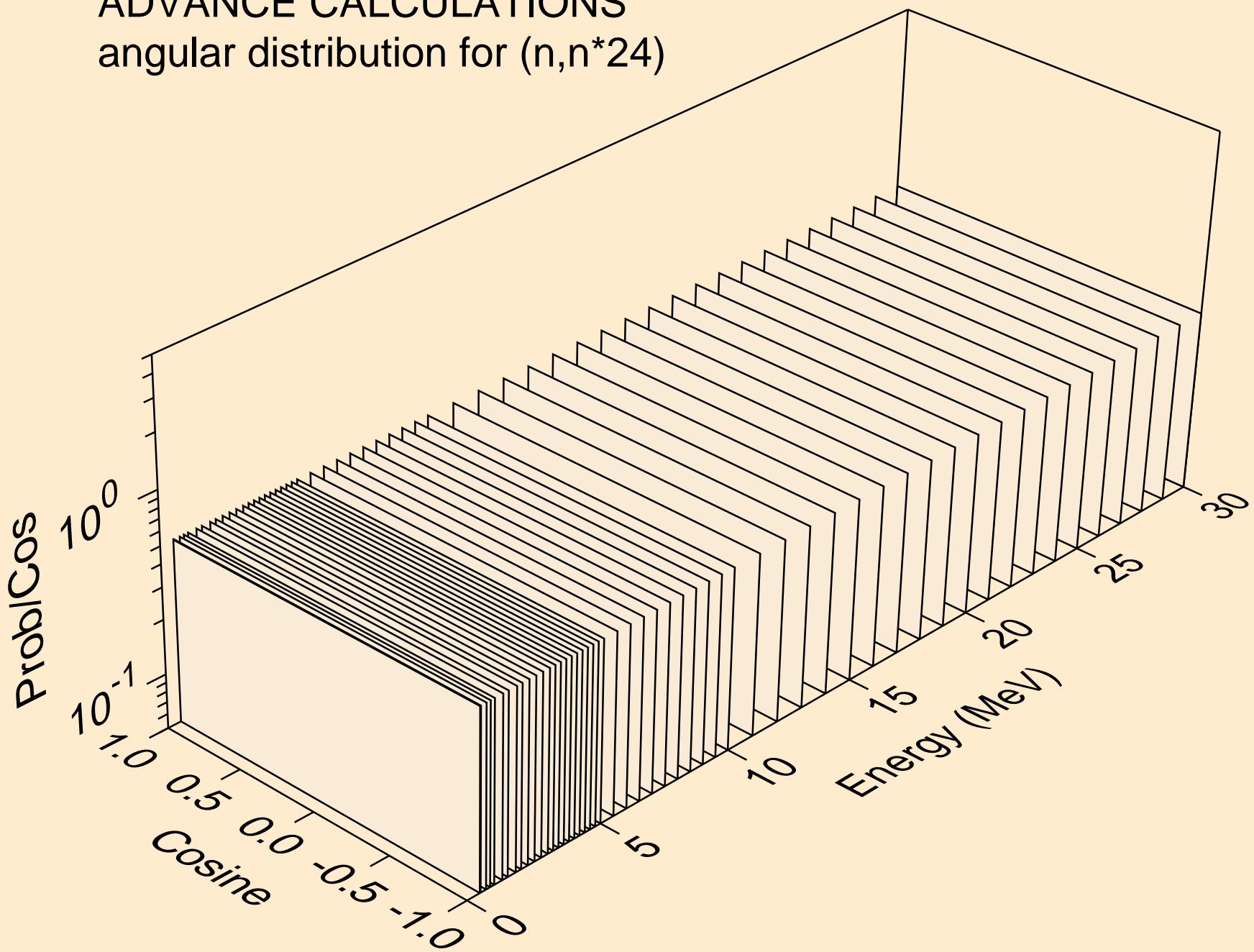
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*23)$



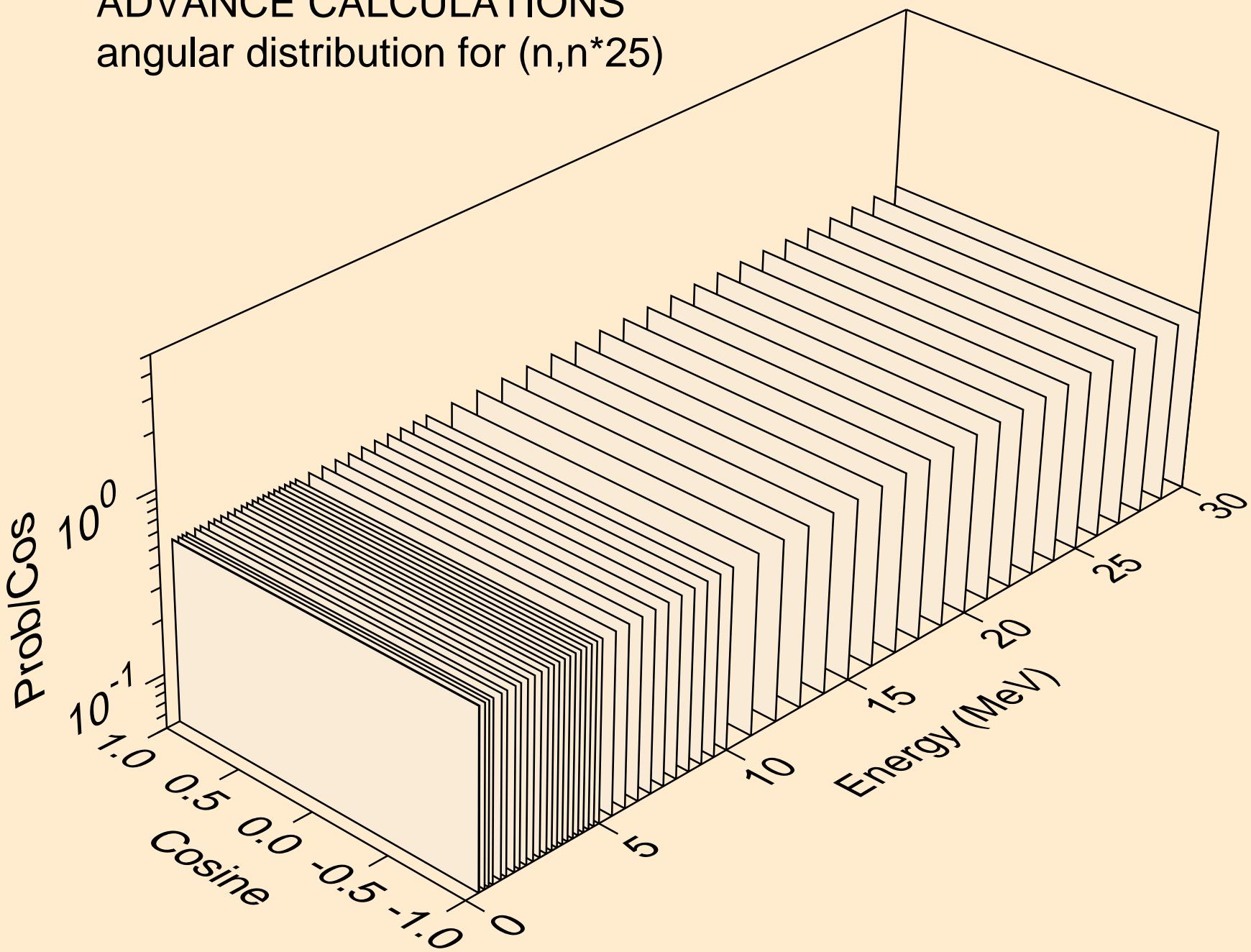
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)^{24}$



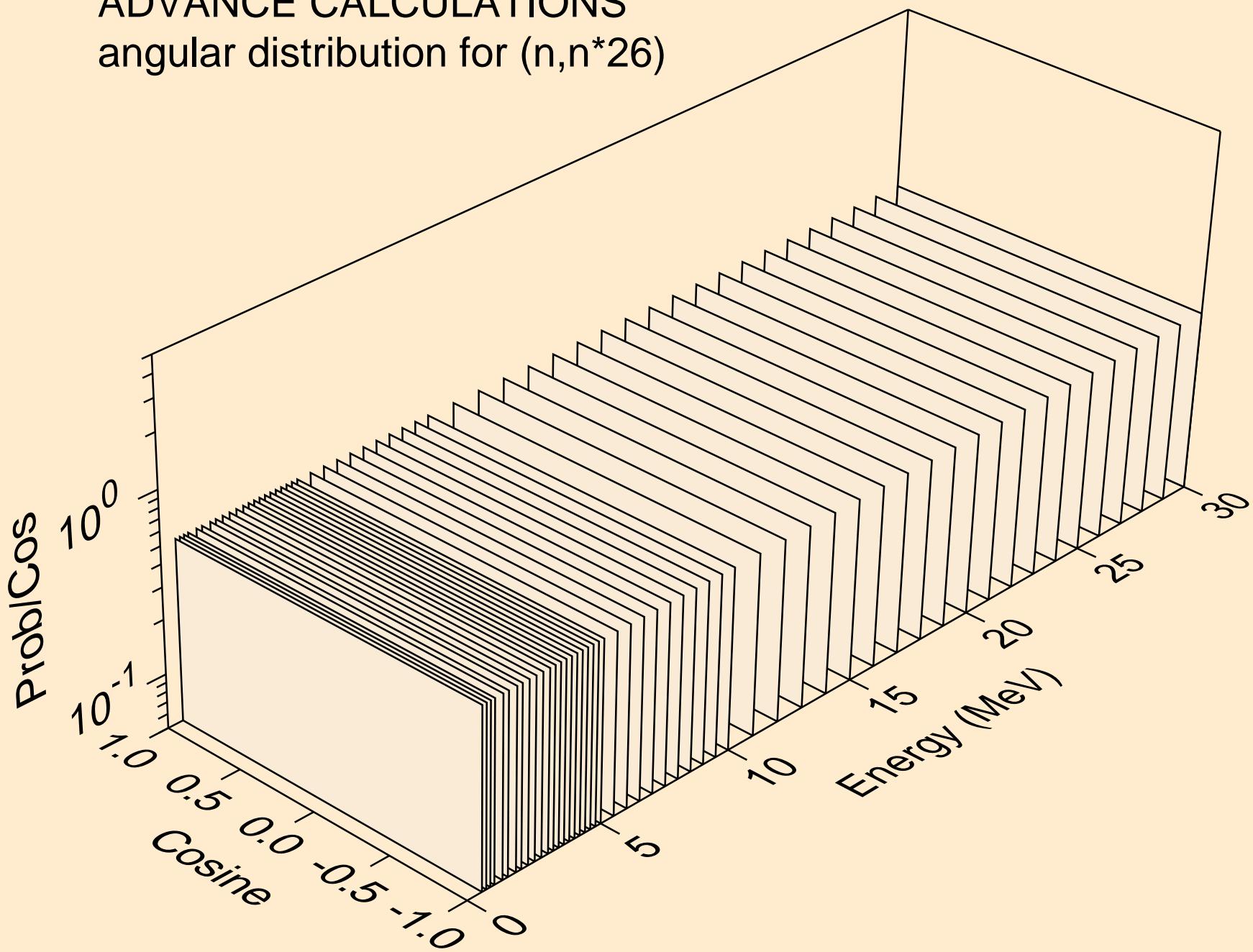
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)_{25}$



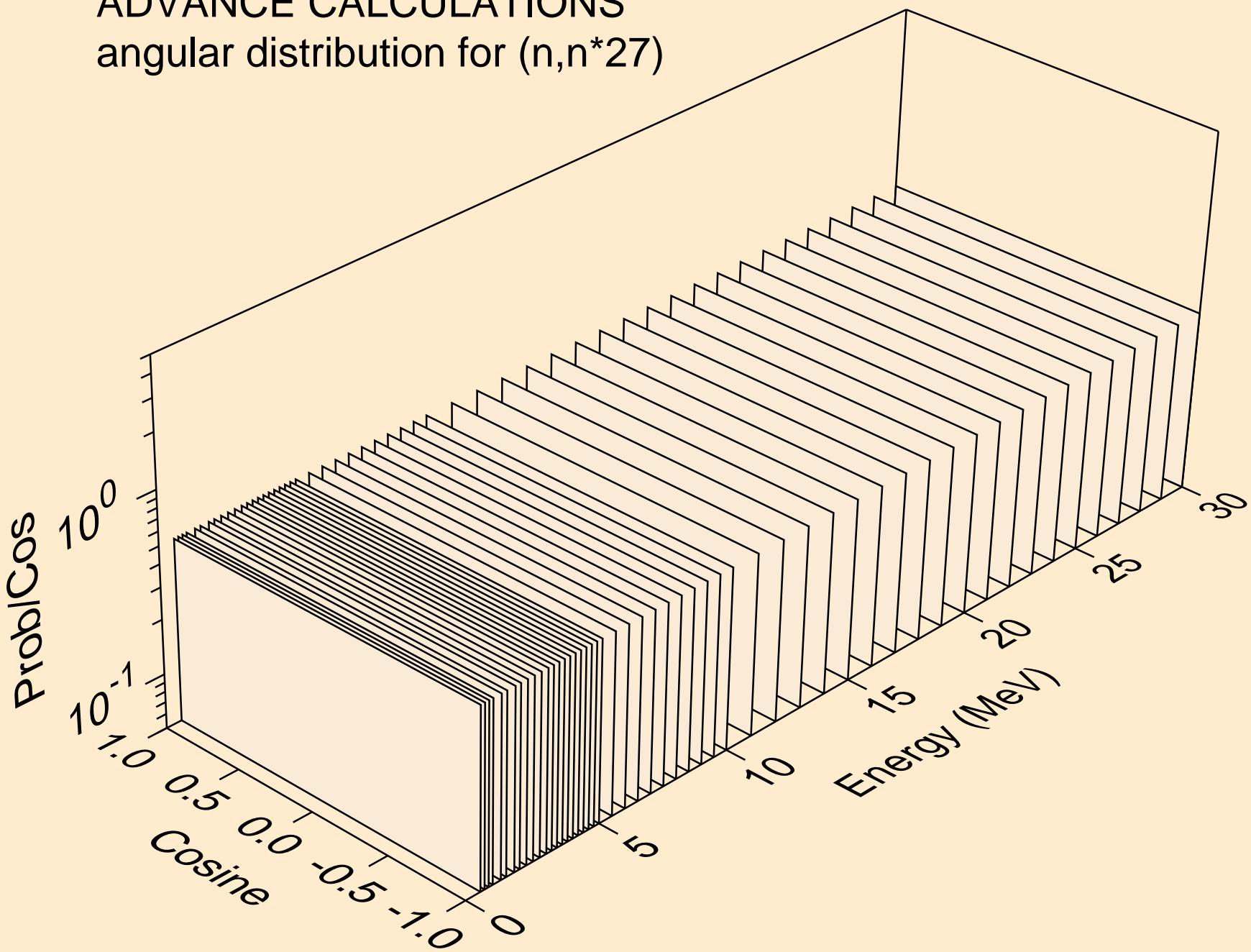
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)_{26}$



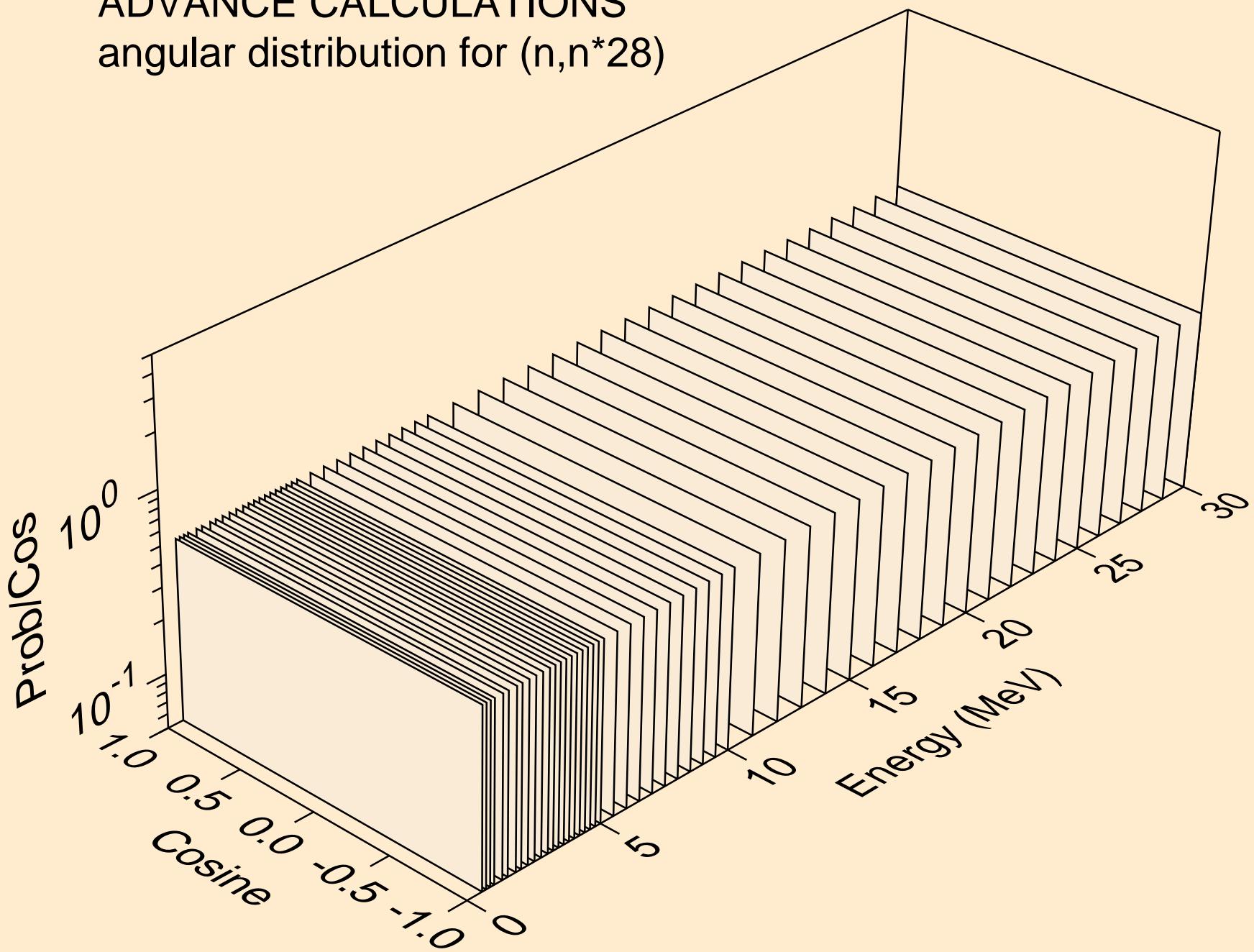
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*27)$



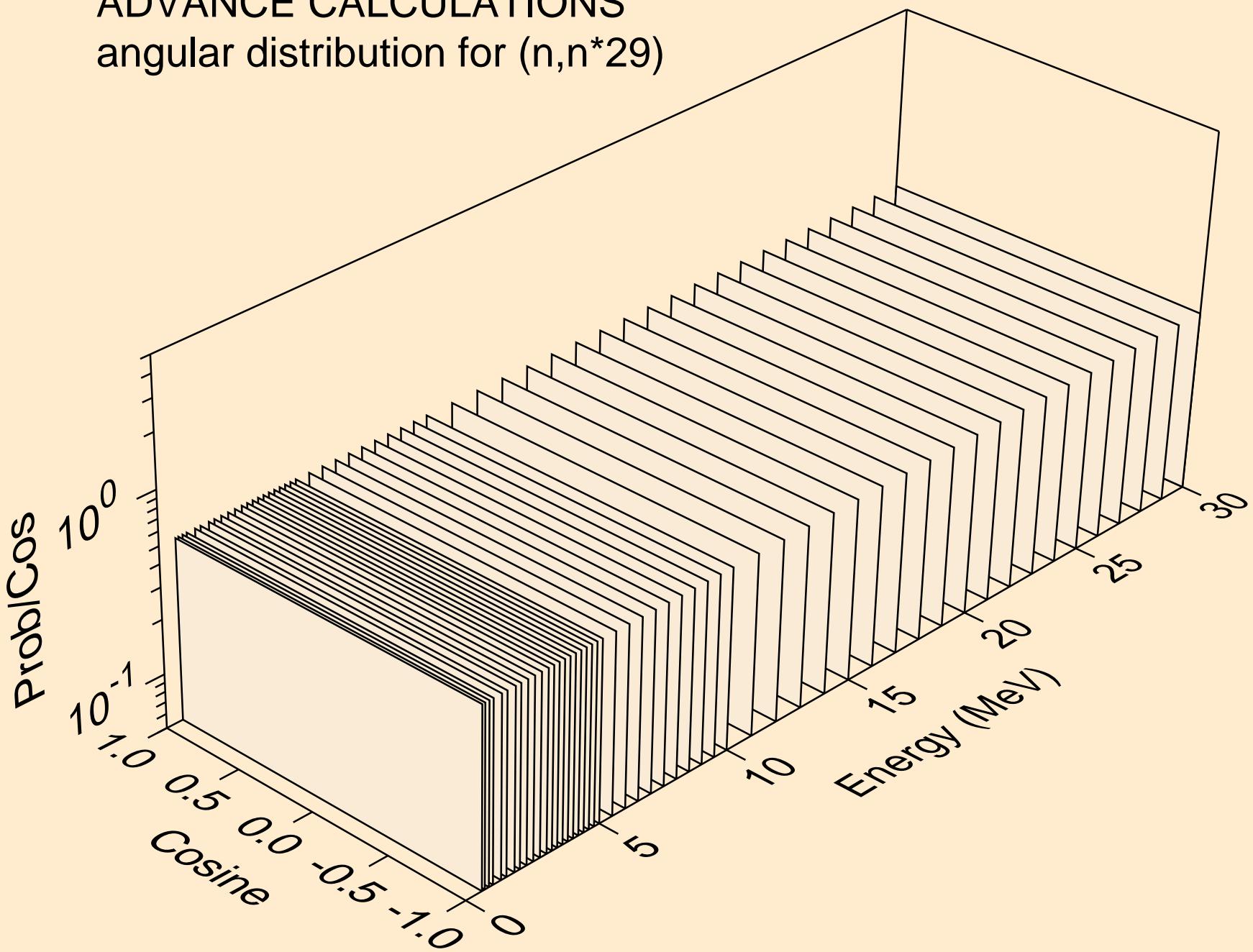
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)^{28}$



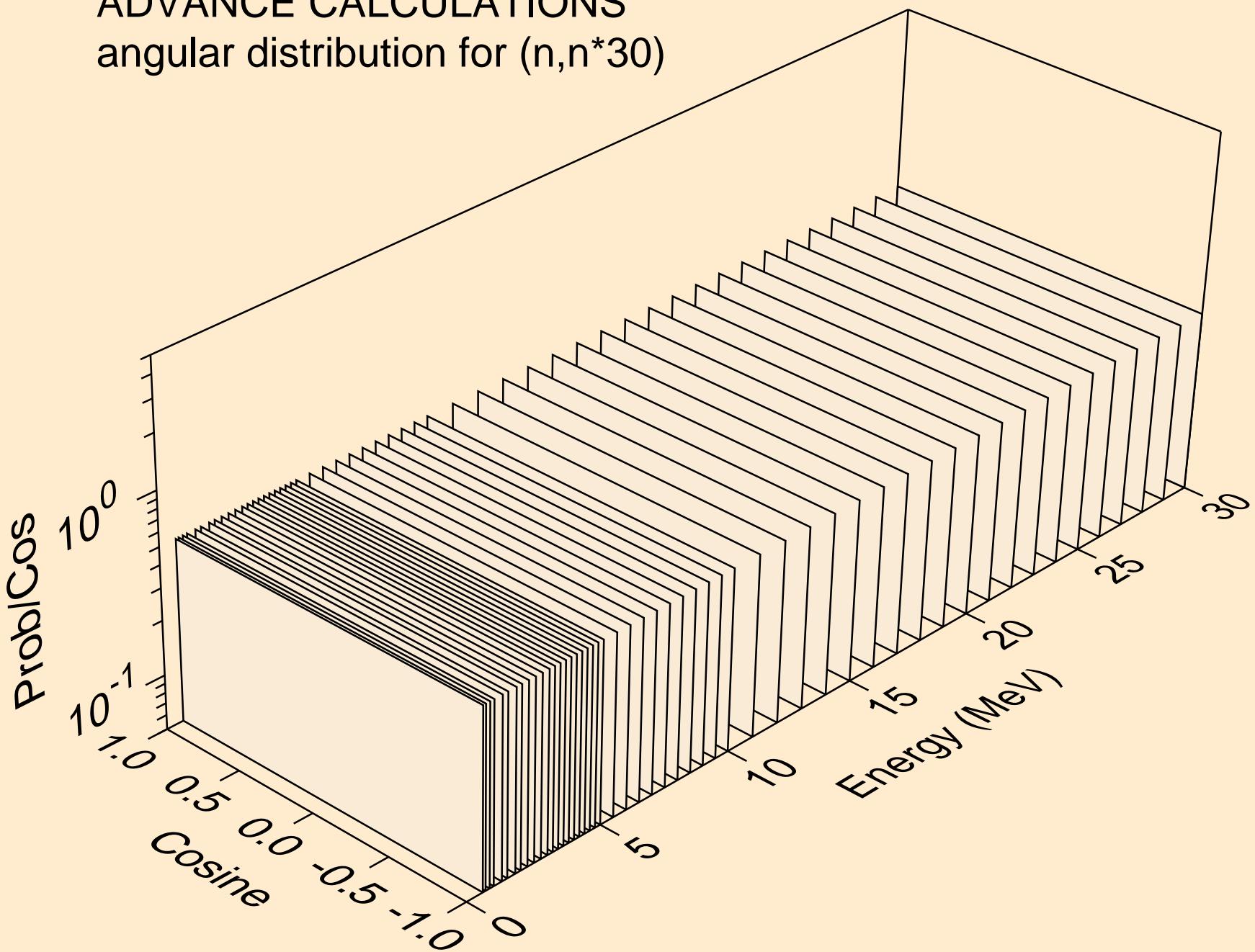
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*29)



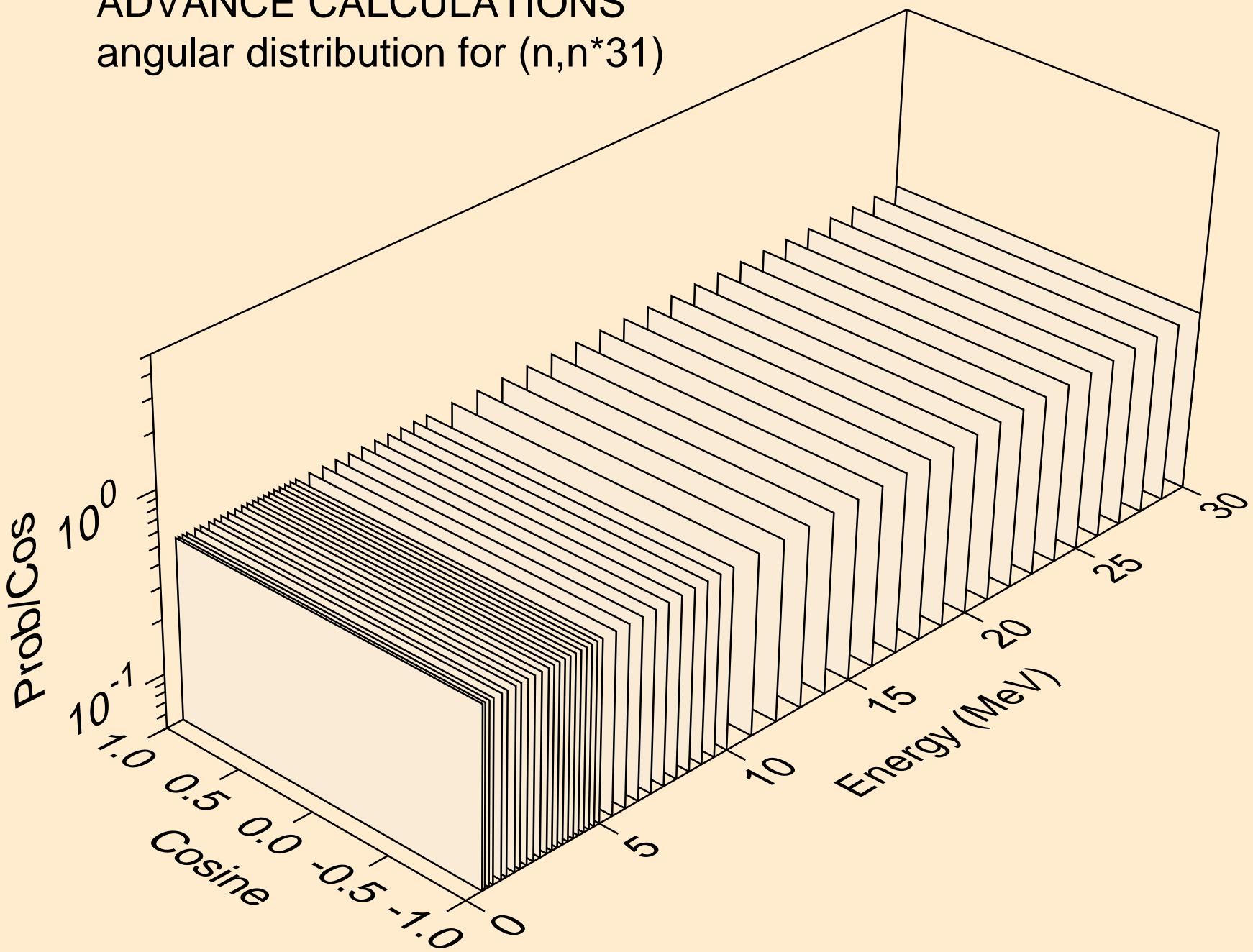
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*)30$



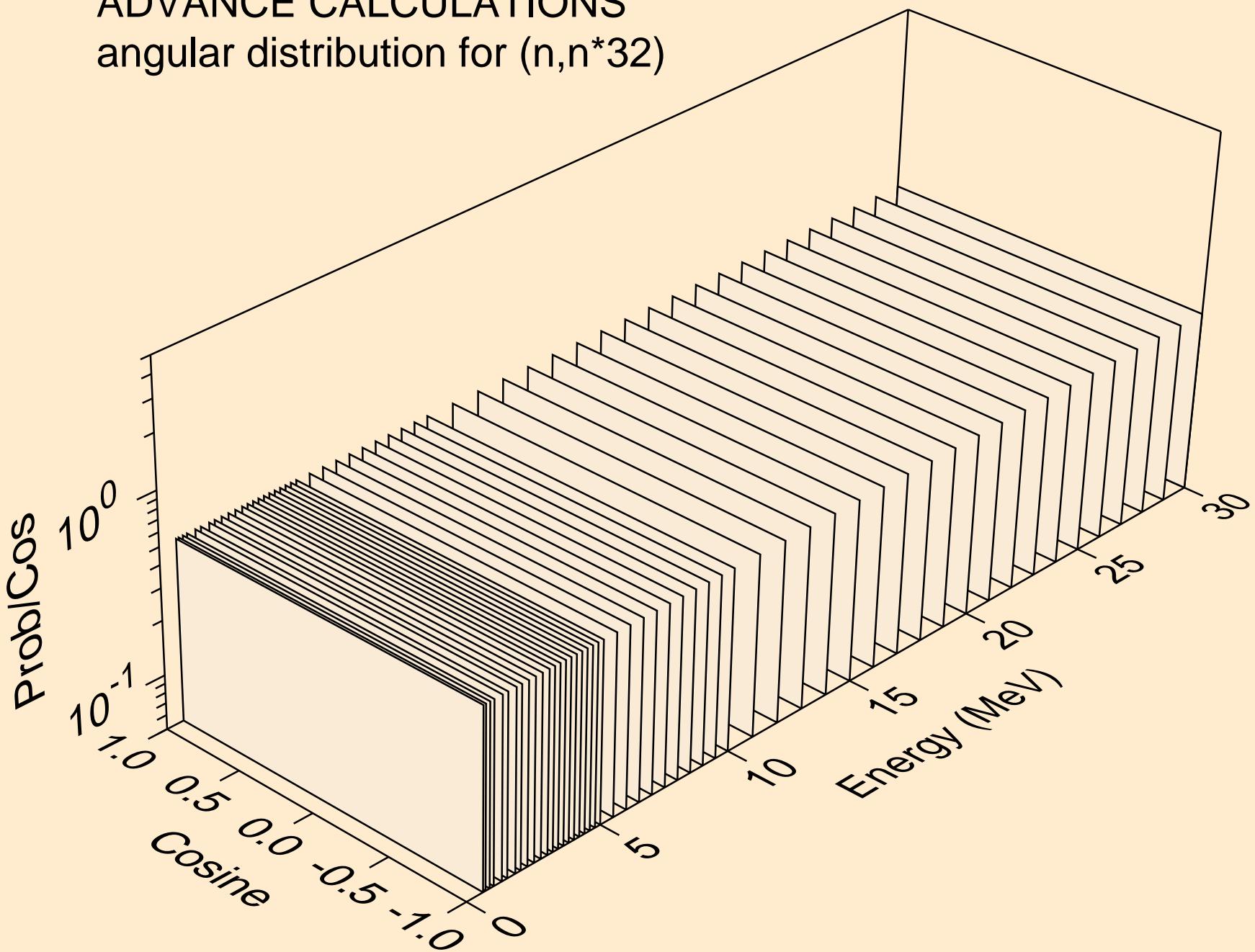
# ADVANCE CALCULATIONS

## angular distribution for ( $n, n^*31$ )



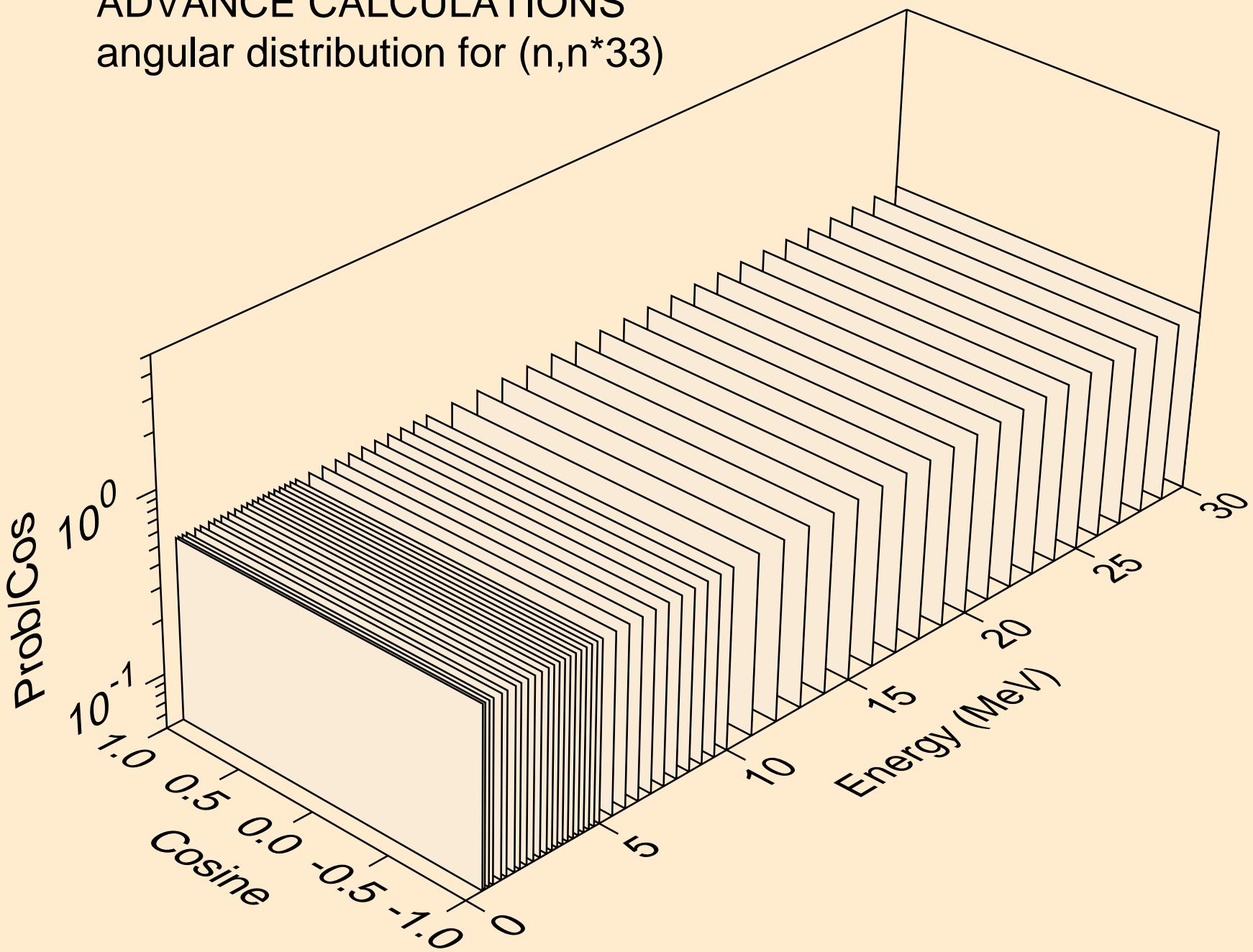
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*32)



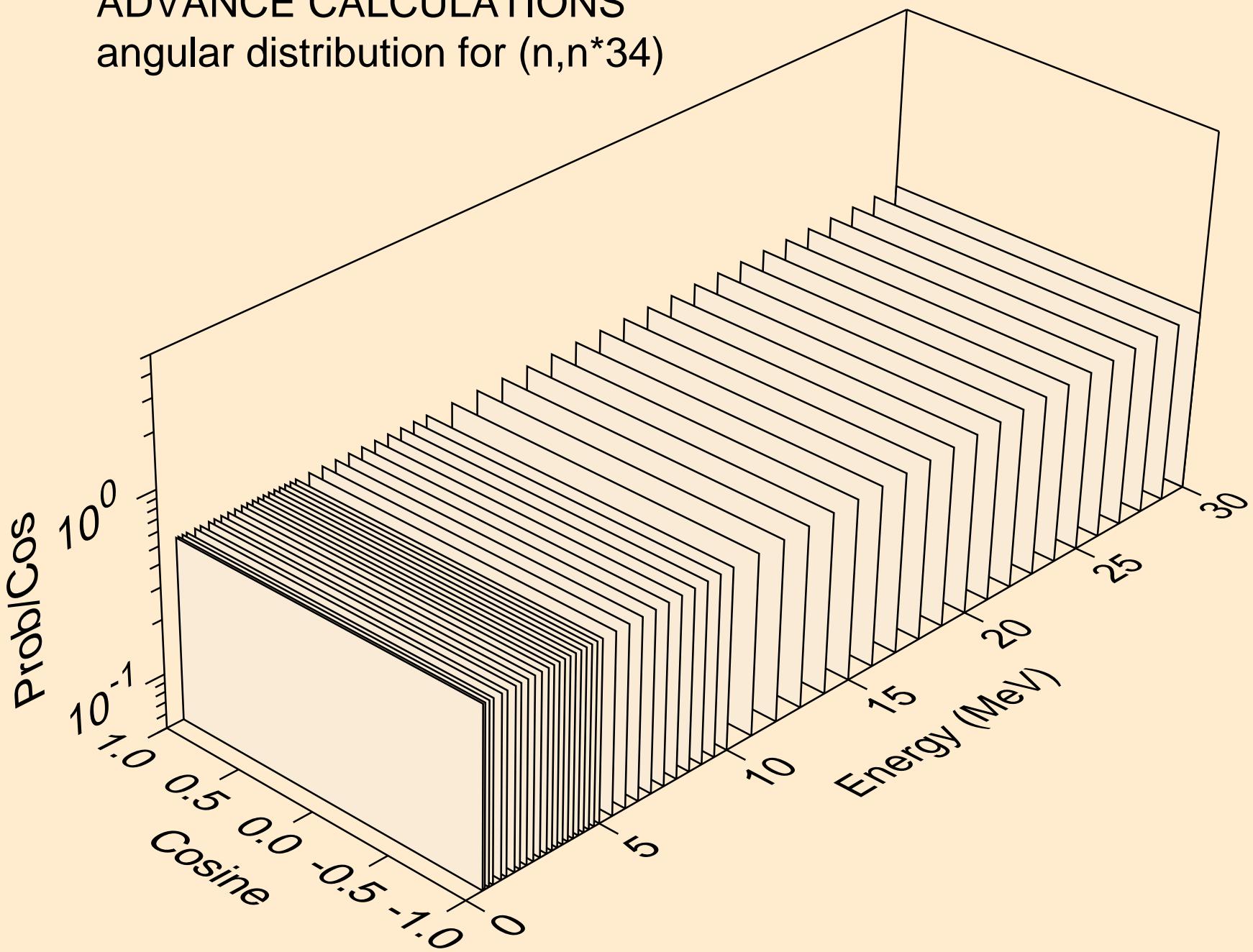
# ADVANCE CALCULATIONS

angular distribution for (n,n\*33)



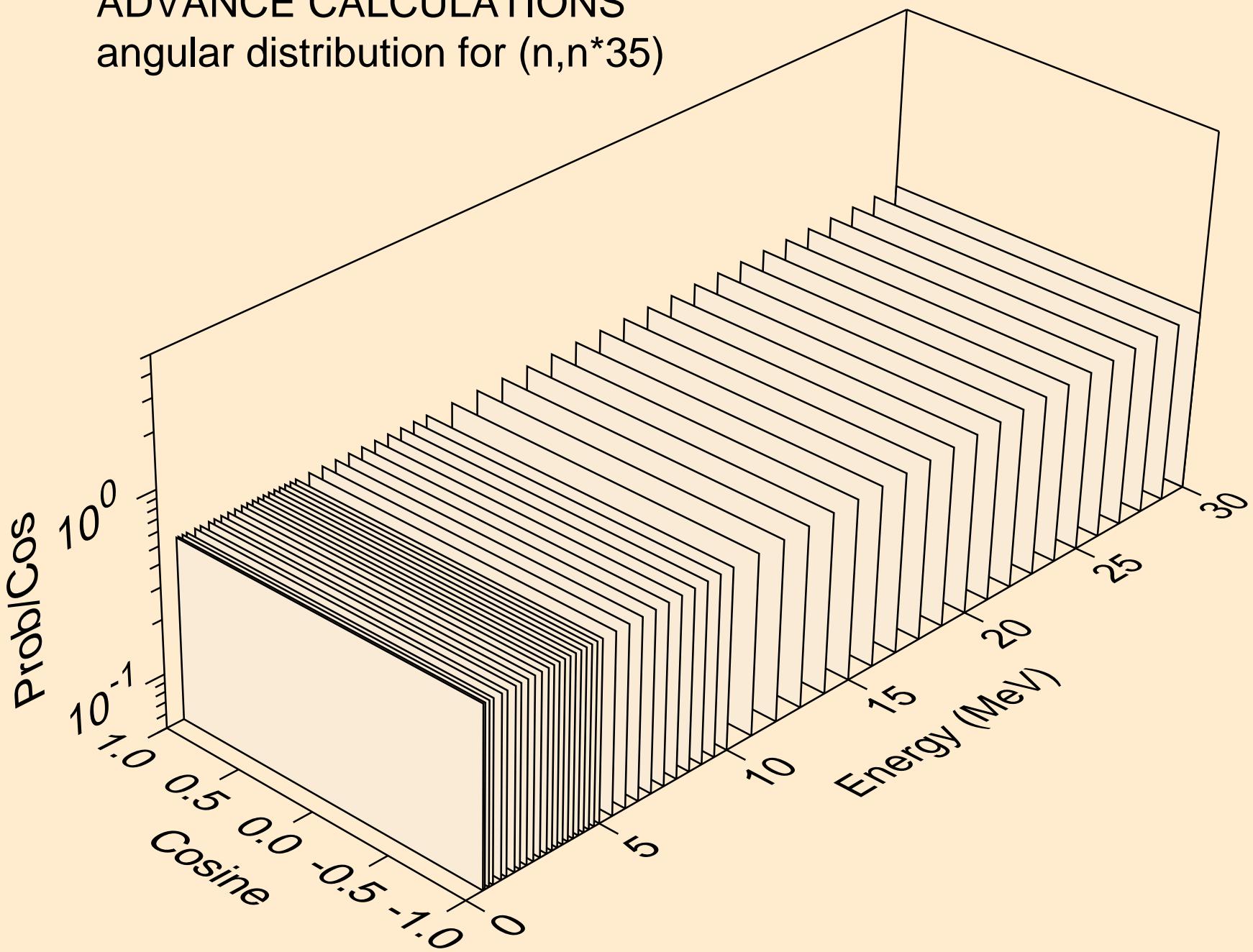
# ADVANCE CALCULATIONS

angular distribution for (n,n\*34)



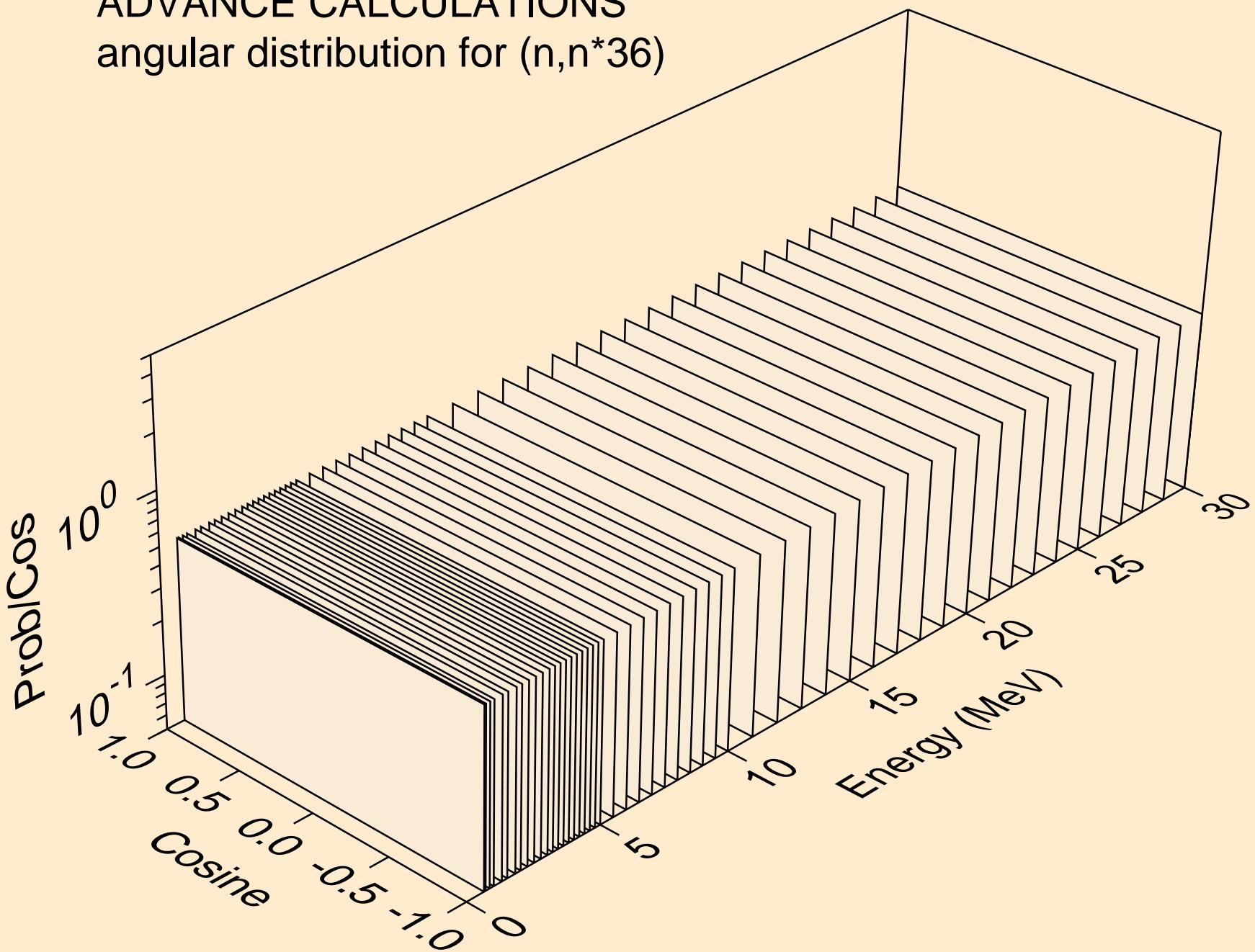
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*35)



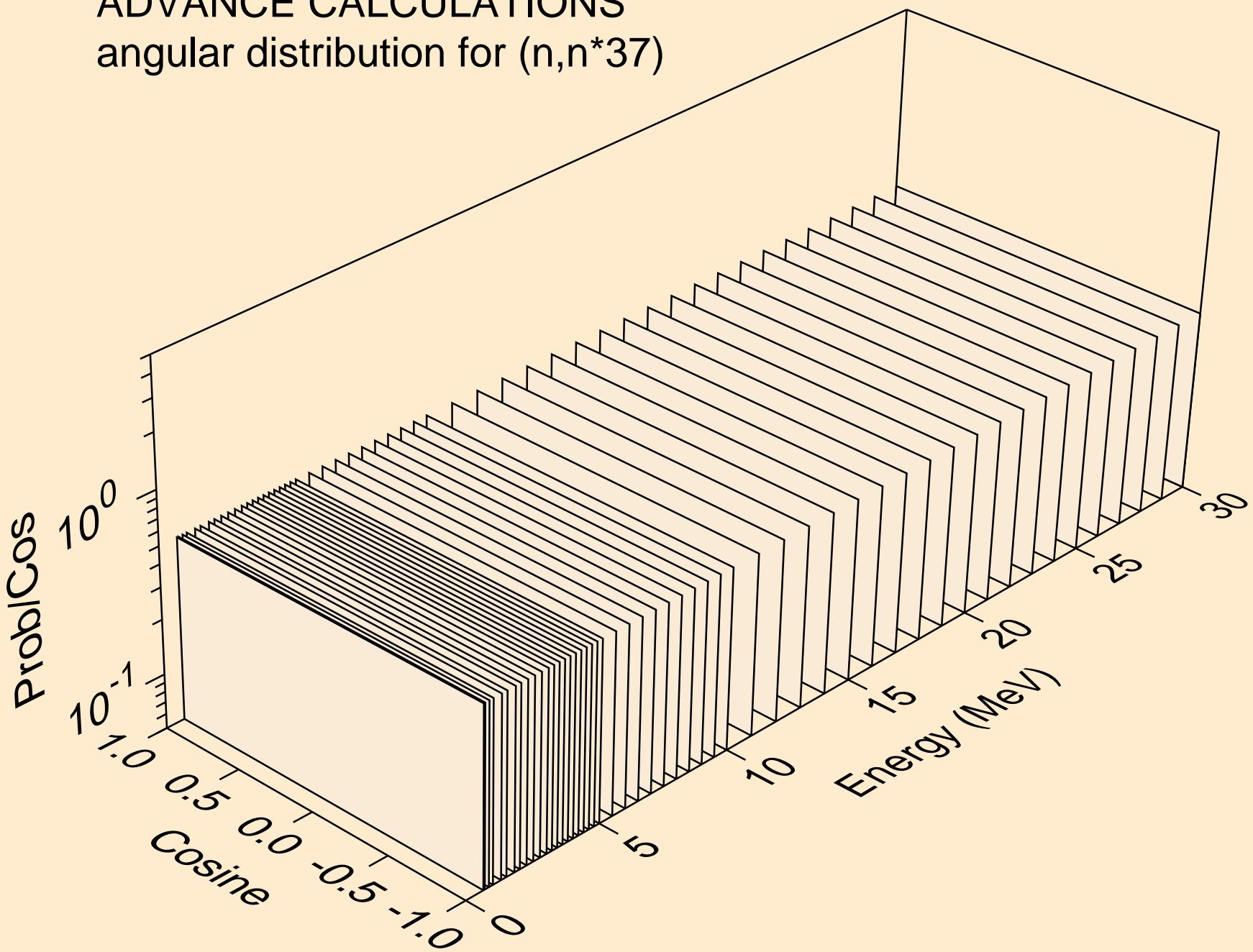
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*36)$



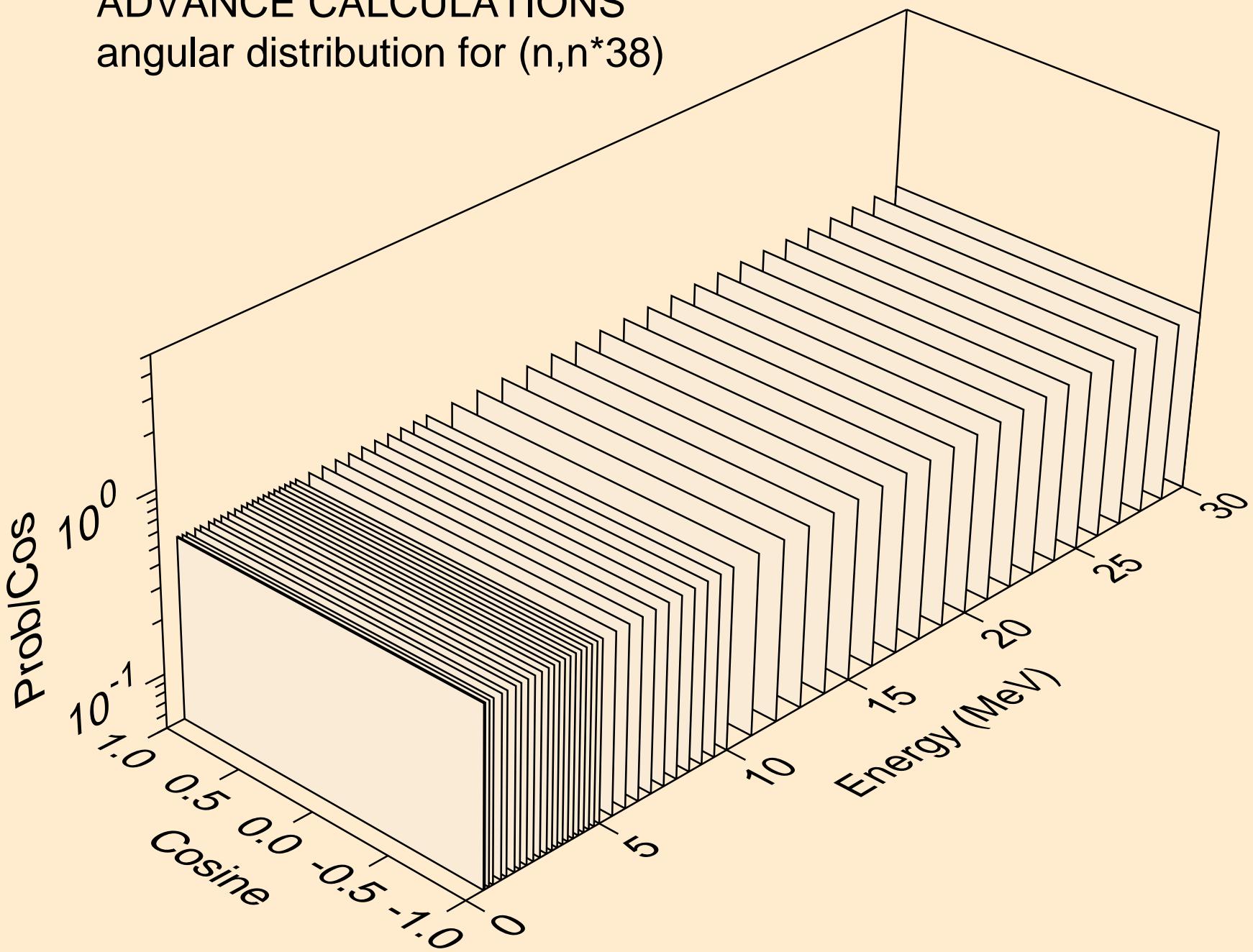
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*37)$



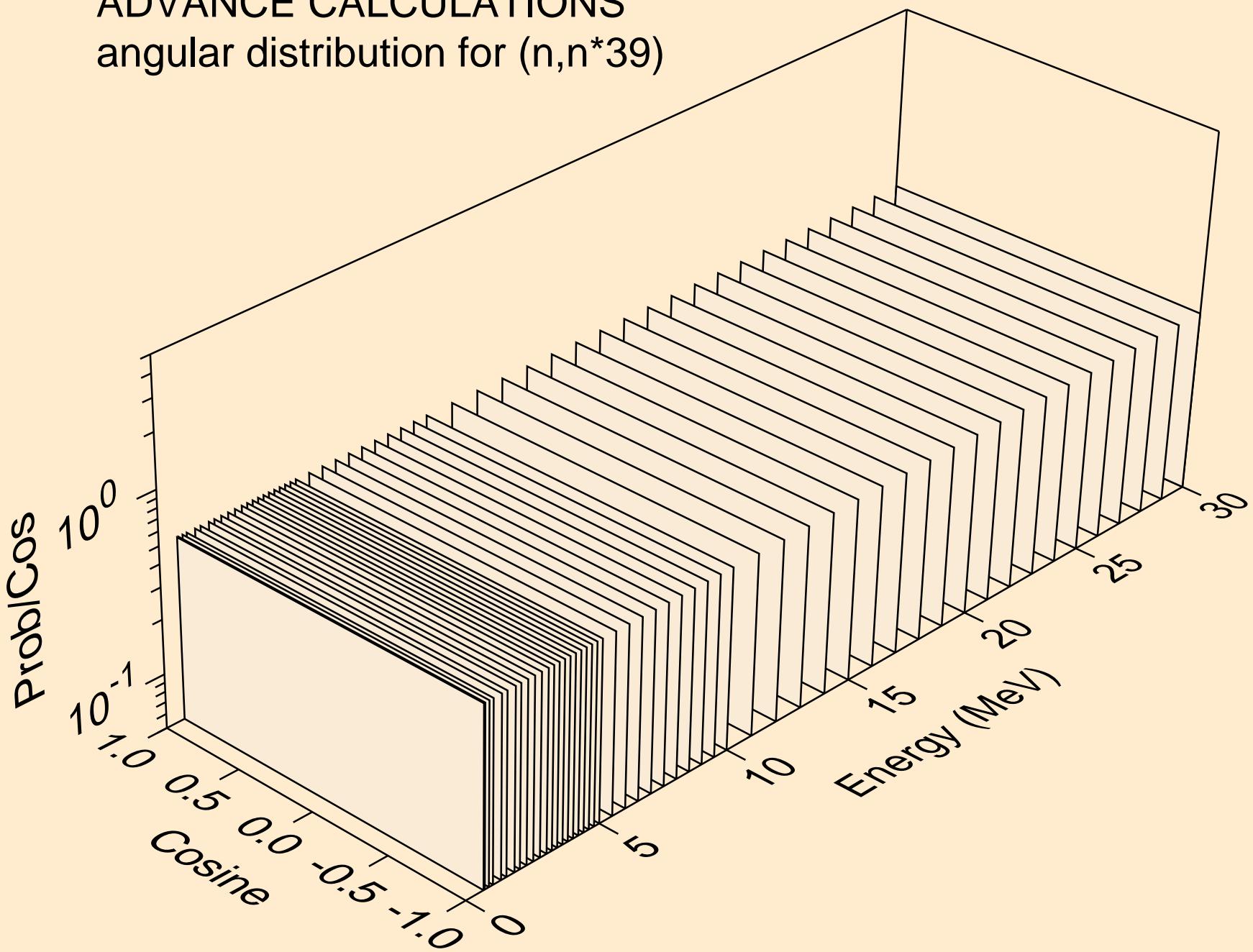
# ADVANCE CALCULATIONS

angular distribution for  $(n,n^*38)$



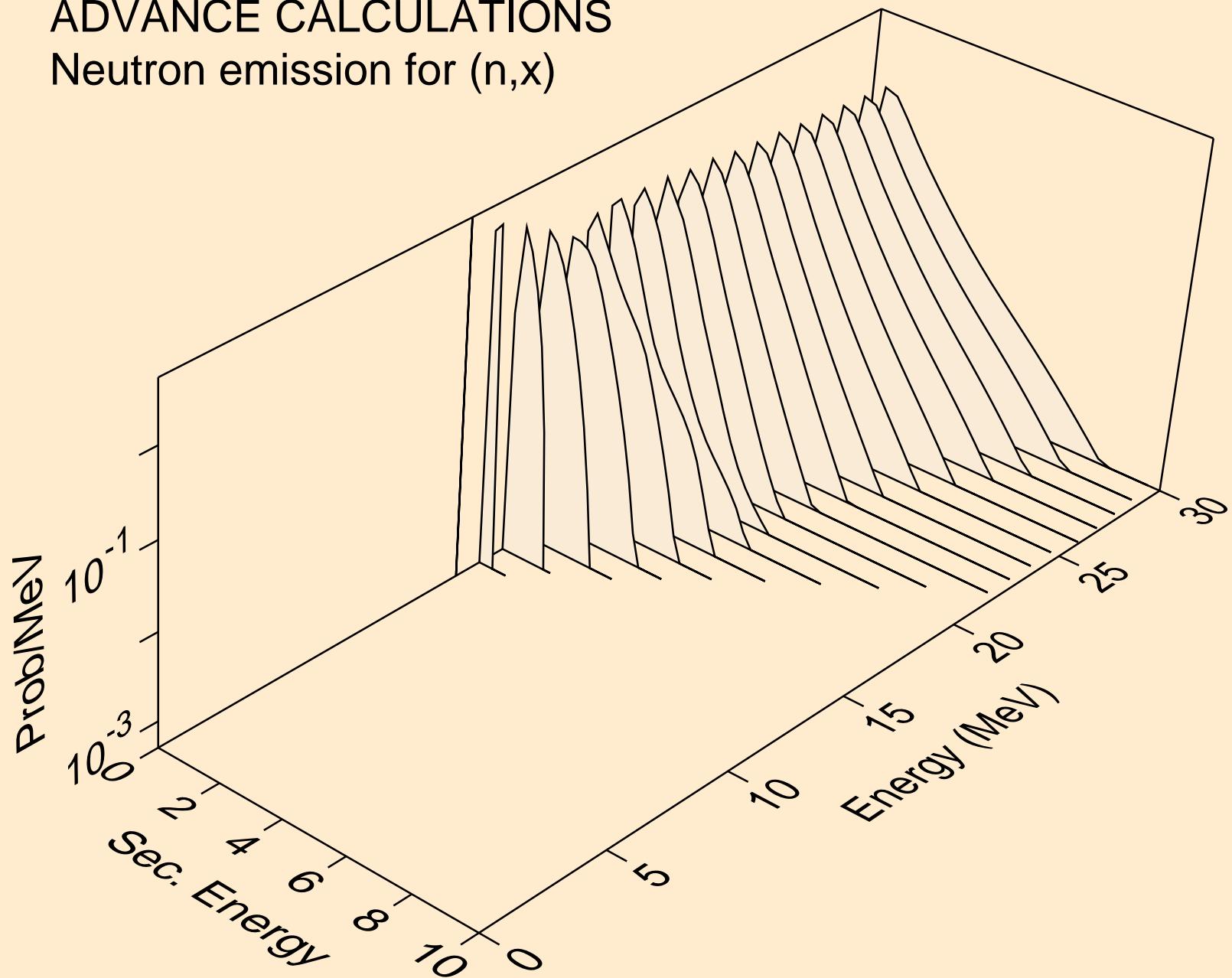
# ADVANCE CALCULATIONS

## angular distribution for (n,n\*39)



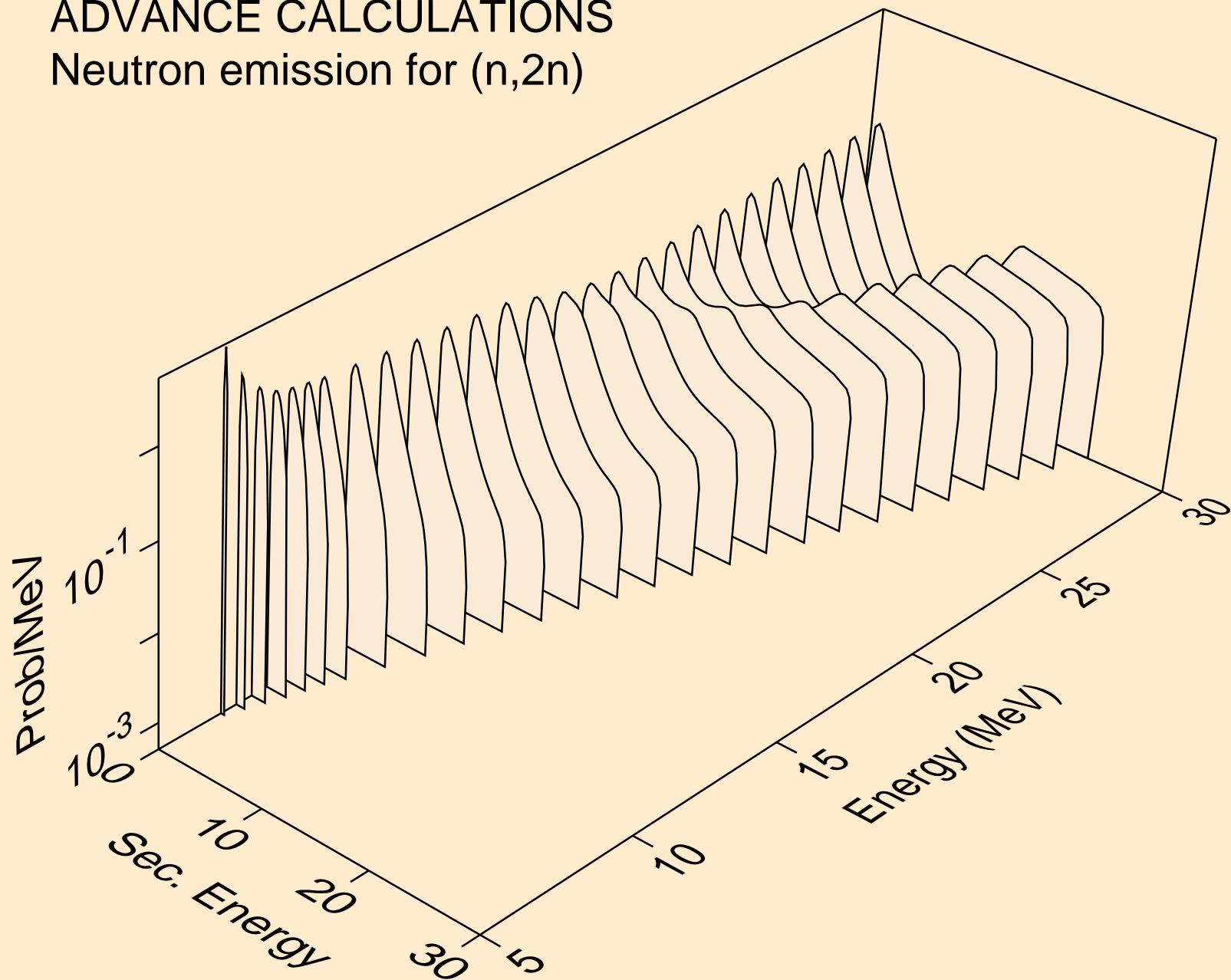
# ADVANCE CALCULATIONS

## Neutron emission for (n,x)



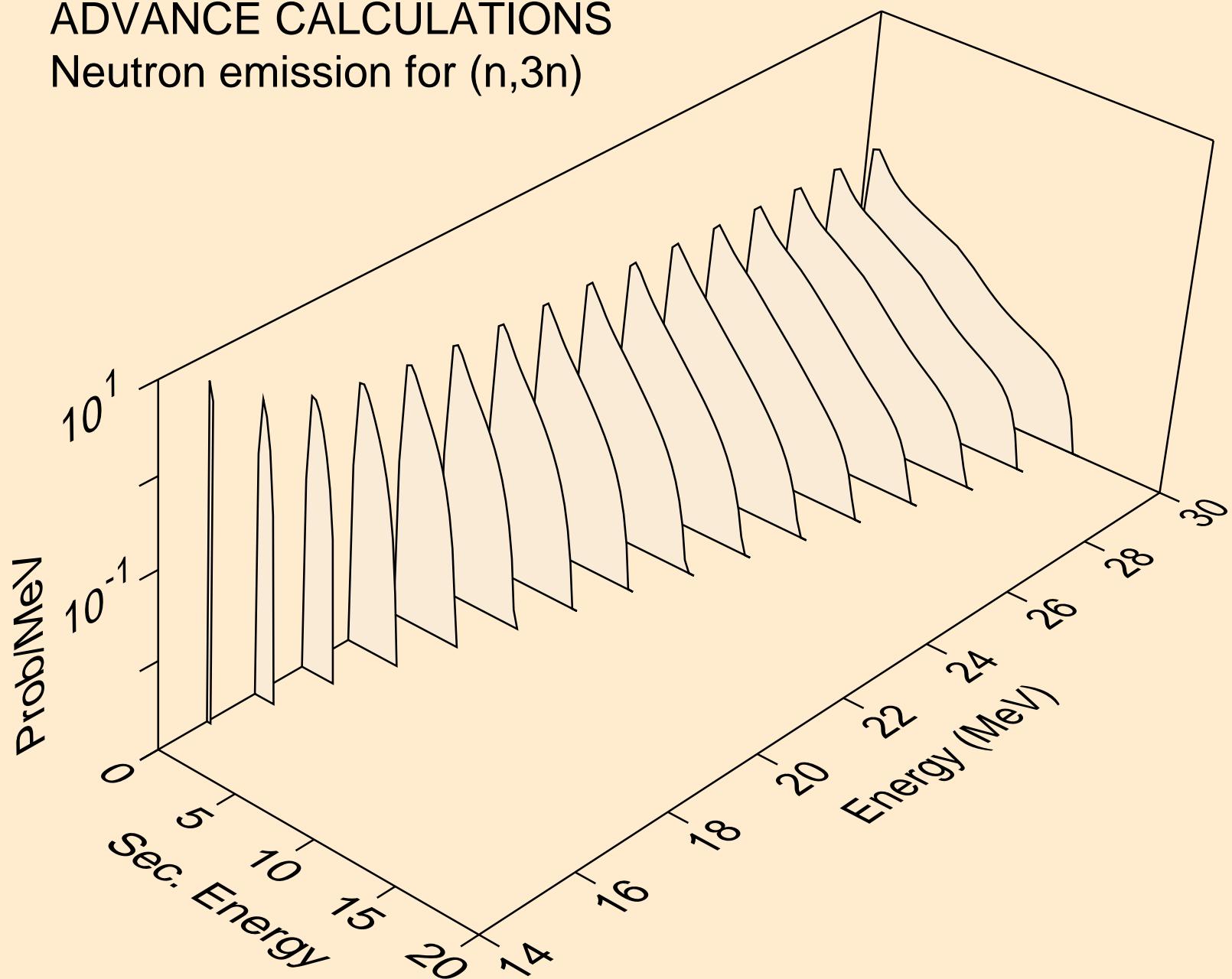
# ADVANCE CALCULATIONS

## Neutron emission for (n,2n)



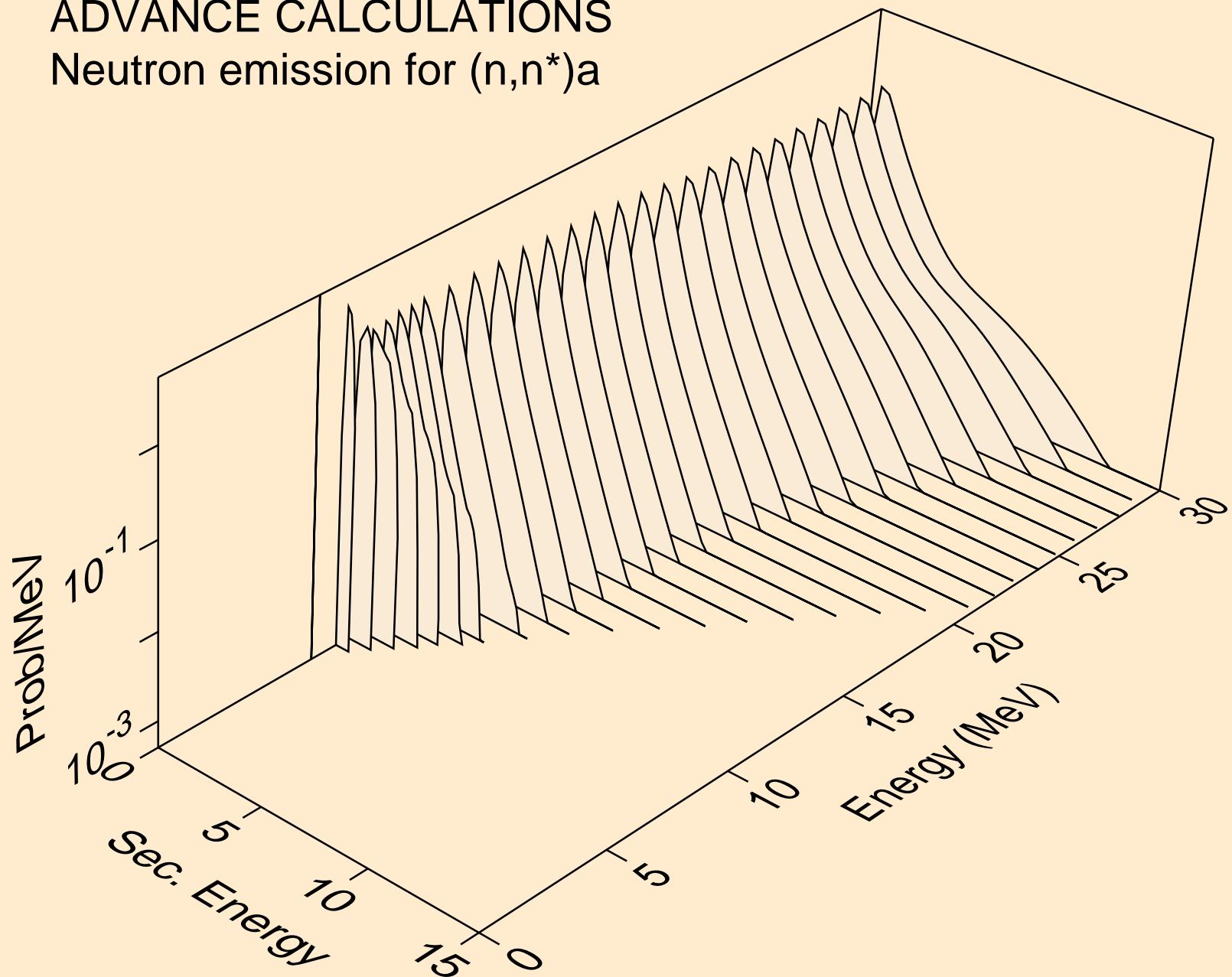
# ADVANCE CALCULATIONS

## Neutron emission for (n,3n)



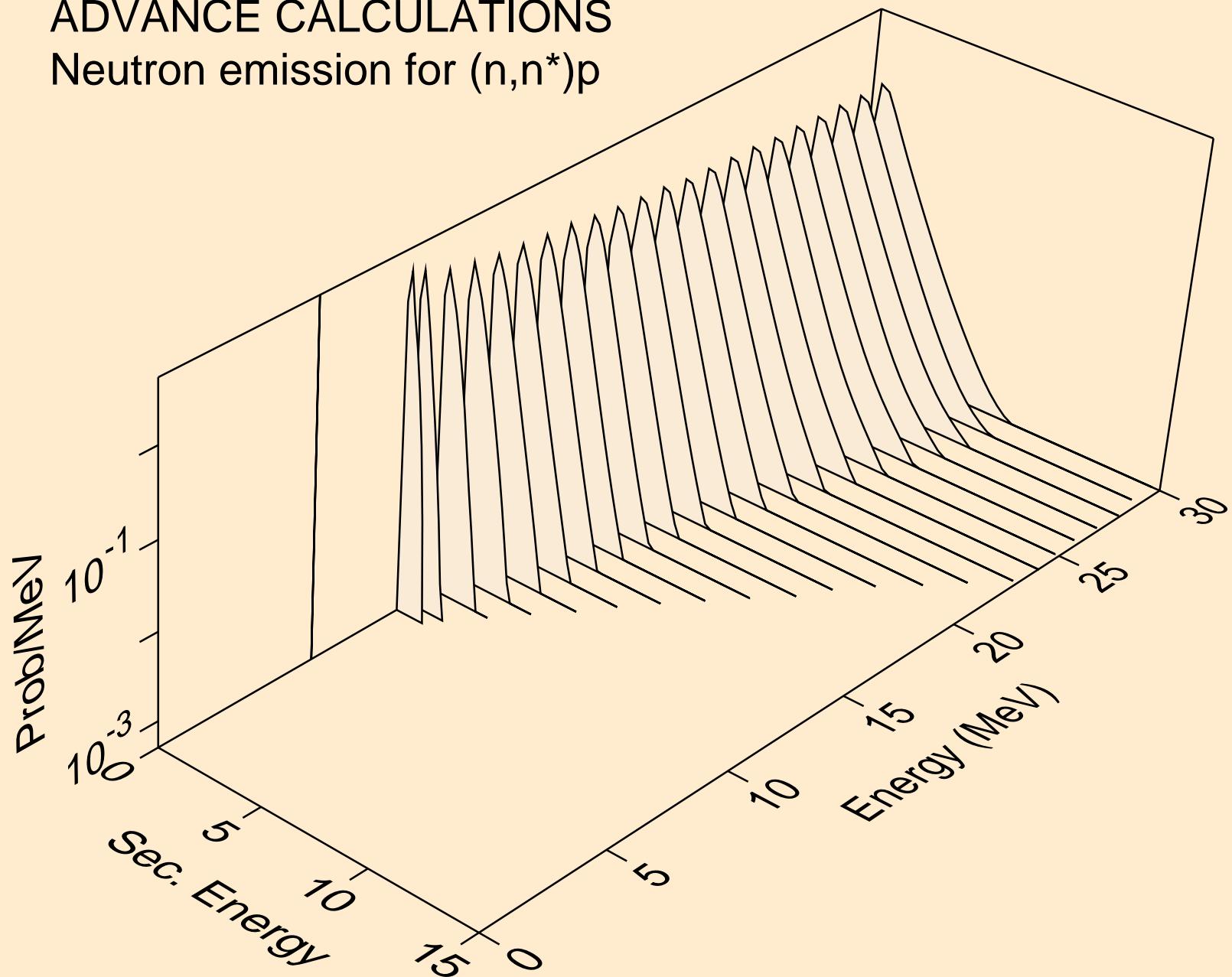
# ADVANCE CALCULATIONS

## Neutron emission for $(n,n^*)a$



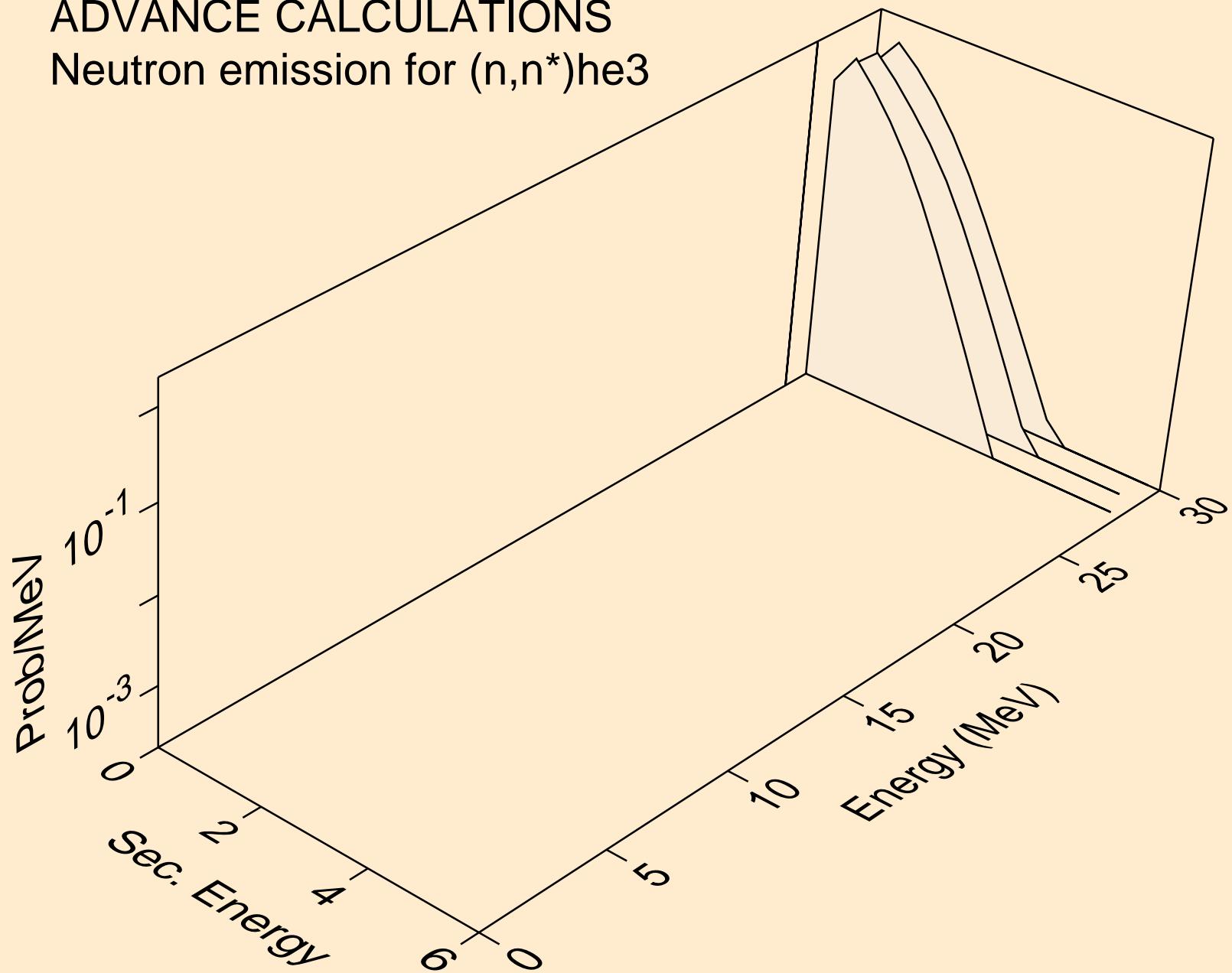
# ADVANCE CALCULATIONS

## Neutron emission for $(n,n^*)p$



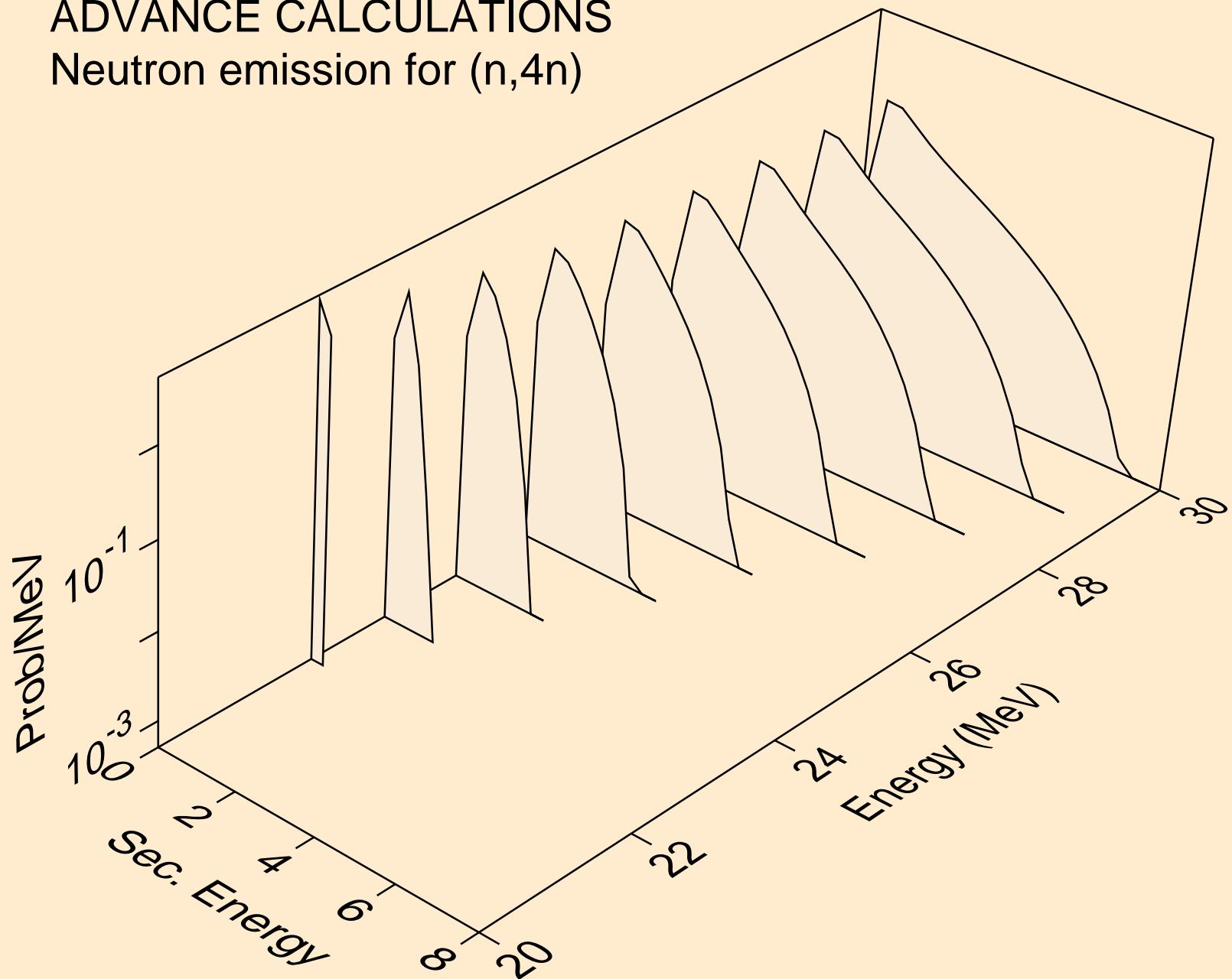
# ADVANCE CALCULATIONS

## Neutron emission for $(n,n^*)\text{he}3$



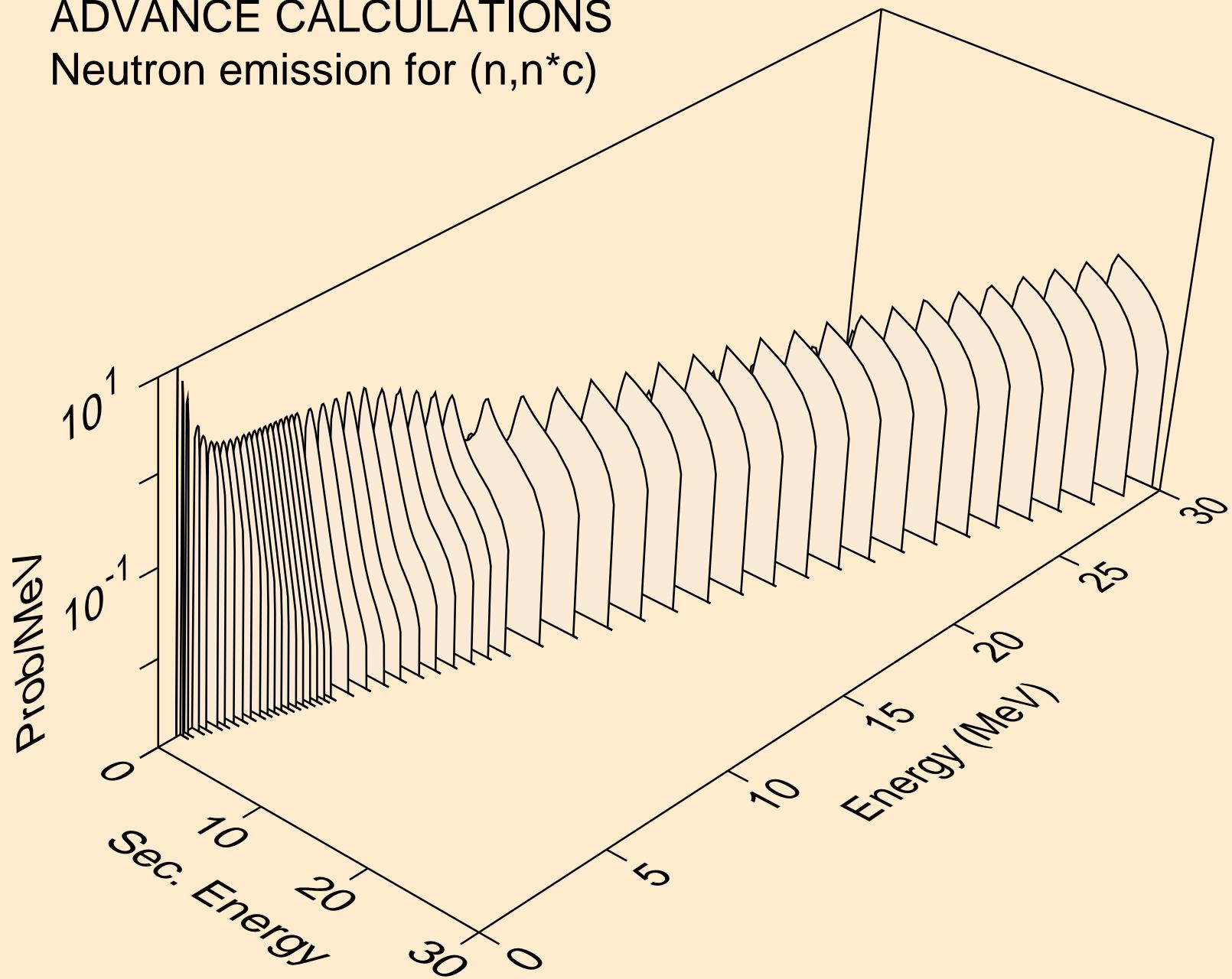
# ADVANCE CALCULATIONS

## Neutron emission for (n,4n)



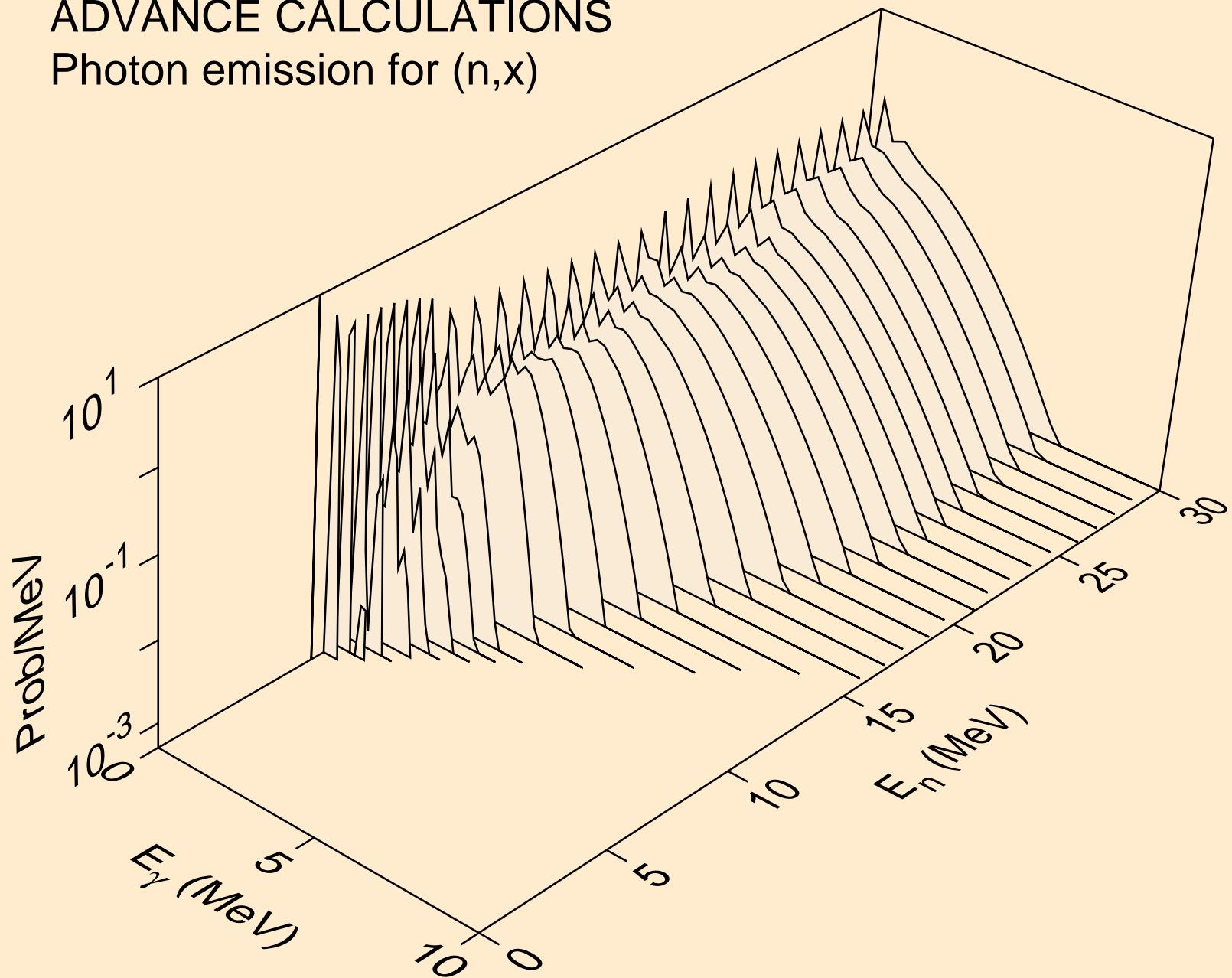
# ADVANCE CALCULATIONS

## Neutron emission for $(n,n^*c)$



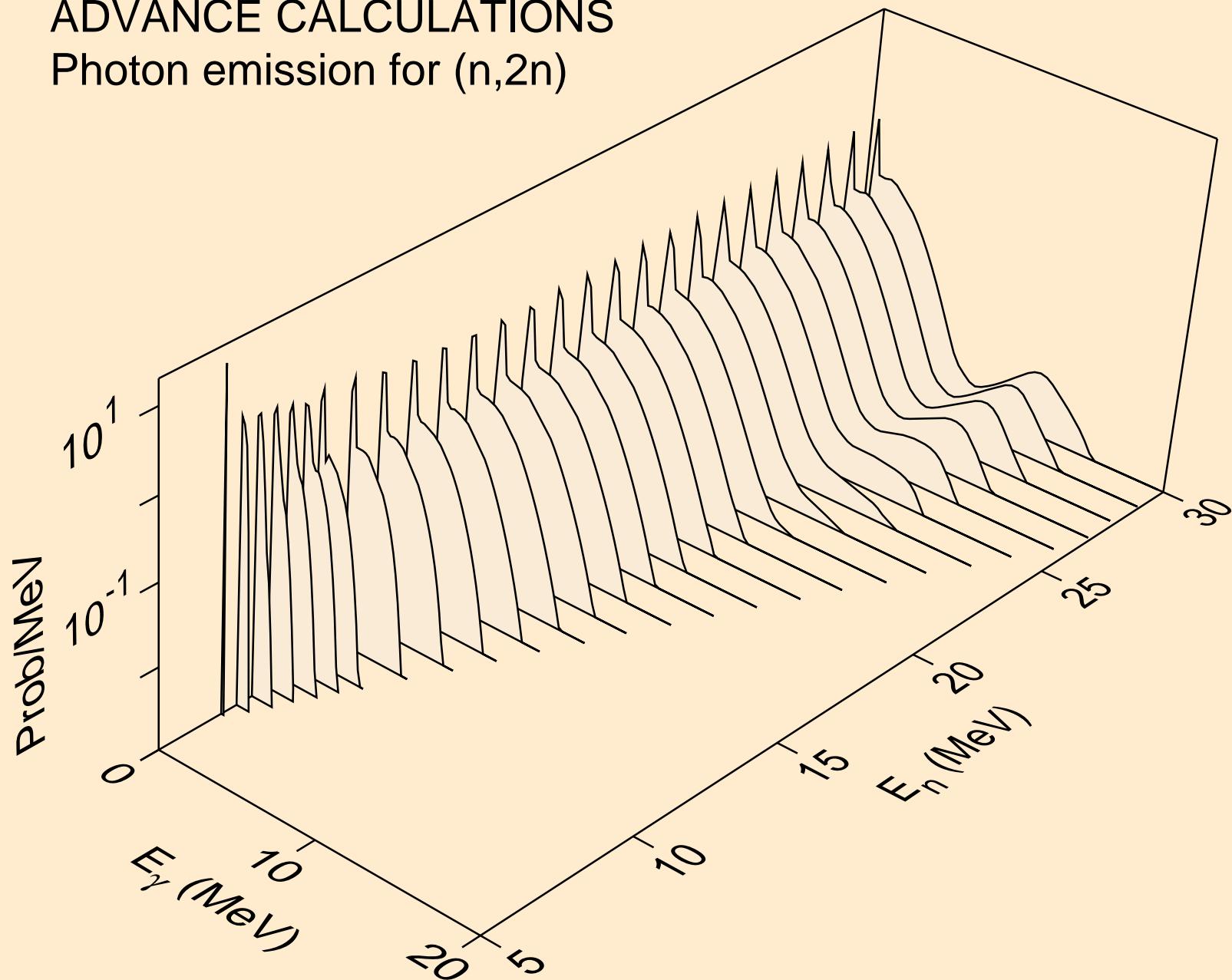
# ADVANCE CALCULATIONS

## Photon emission for (n,x)



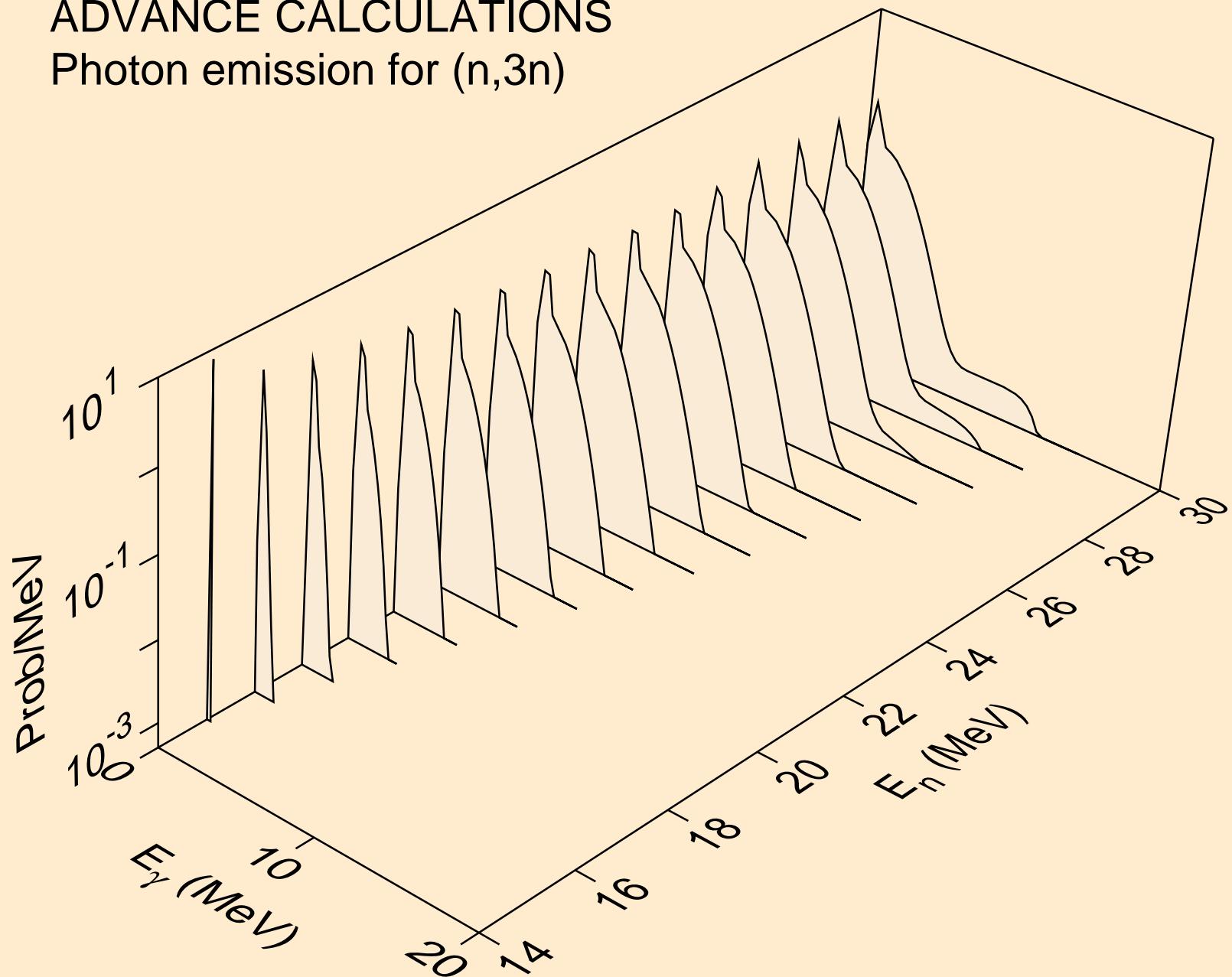
# ADVANCE CALCULATIONS

## Photon emission for (n,2n)



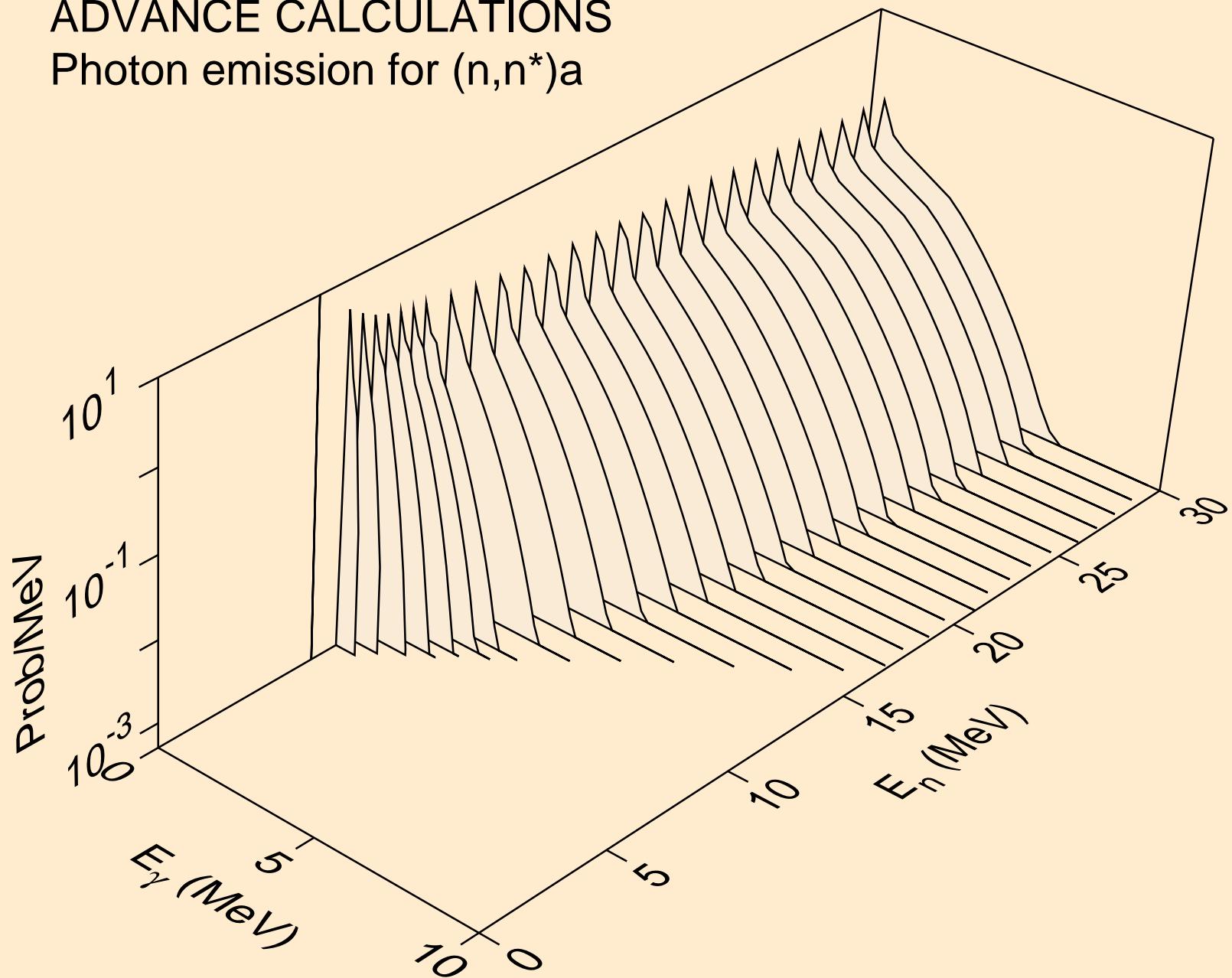
# ADVANCE CALCULATIONS

## Photon emission for (n,3n)



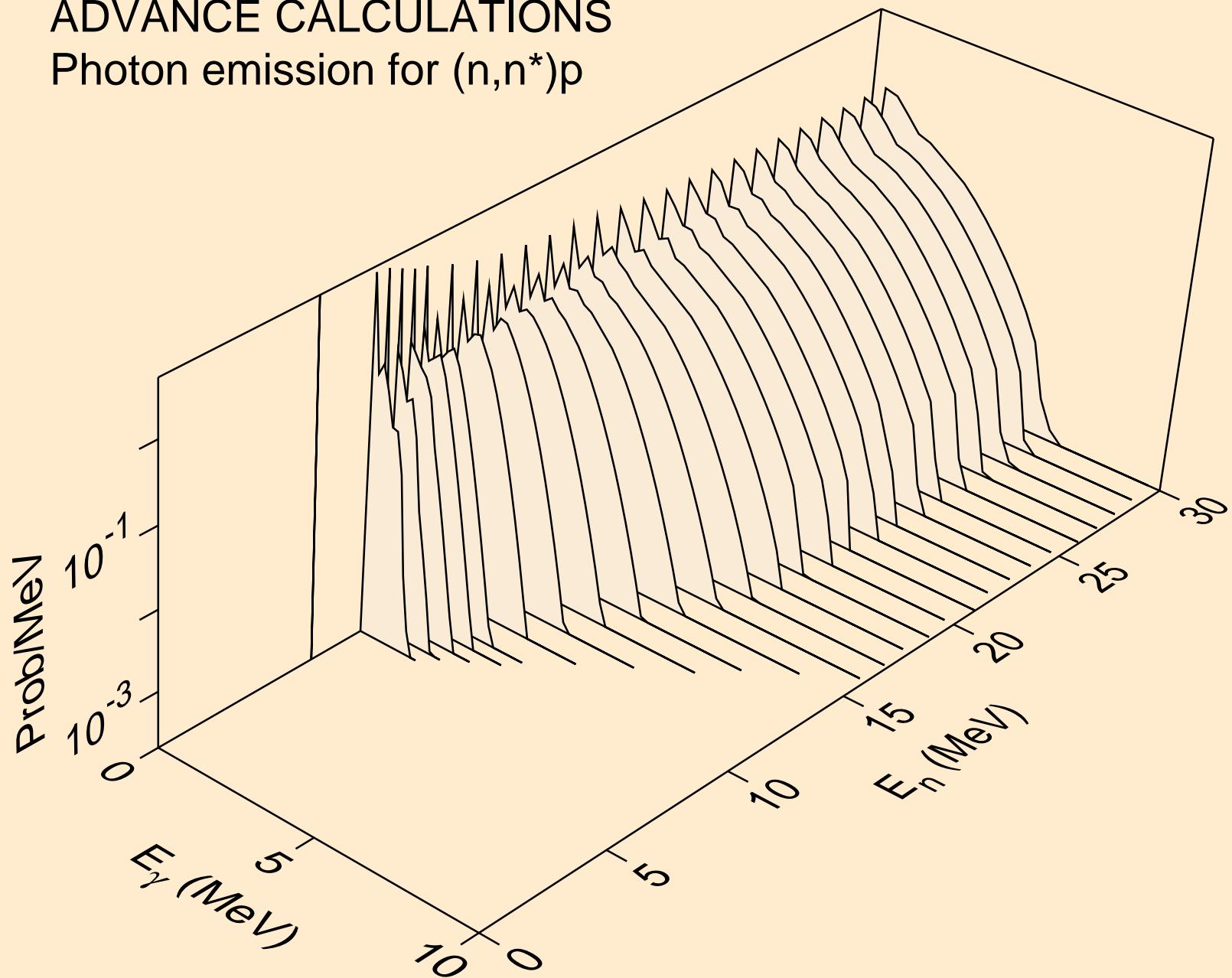
# ADVANCE CALCULATIONS

## Photon emission for $(n,n^*)a$



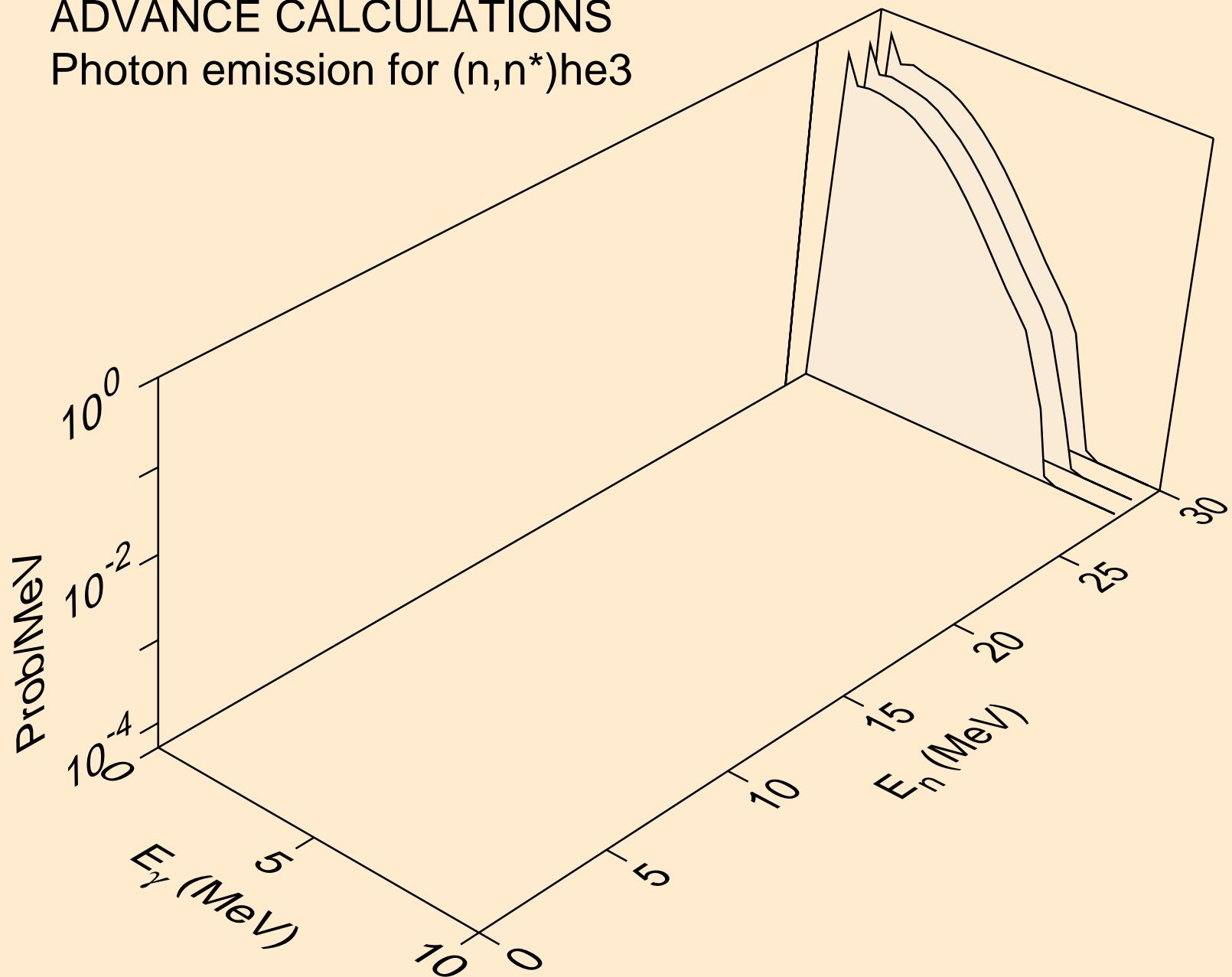
# ADVANCE CALCULATIONS

## Photon emission for $(n,n^*)p$



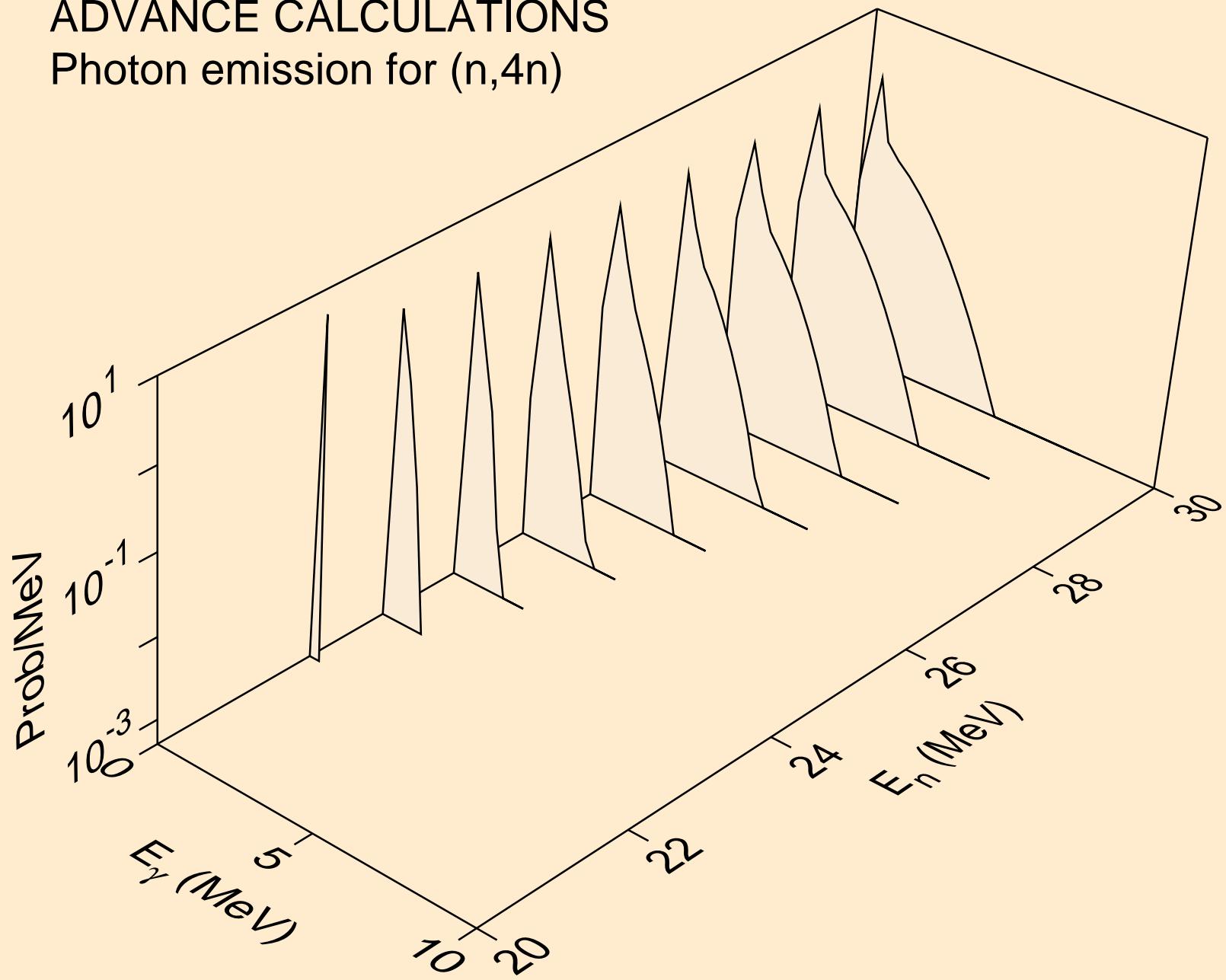
# ADVANCE CALCULATIONS

## Photon emission for $(n,n^*)\text{he3}$



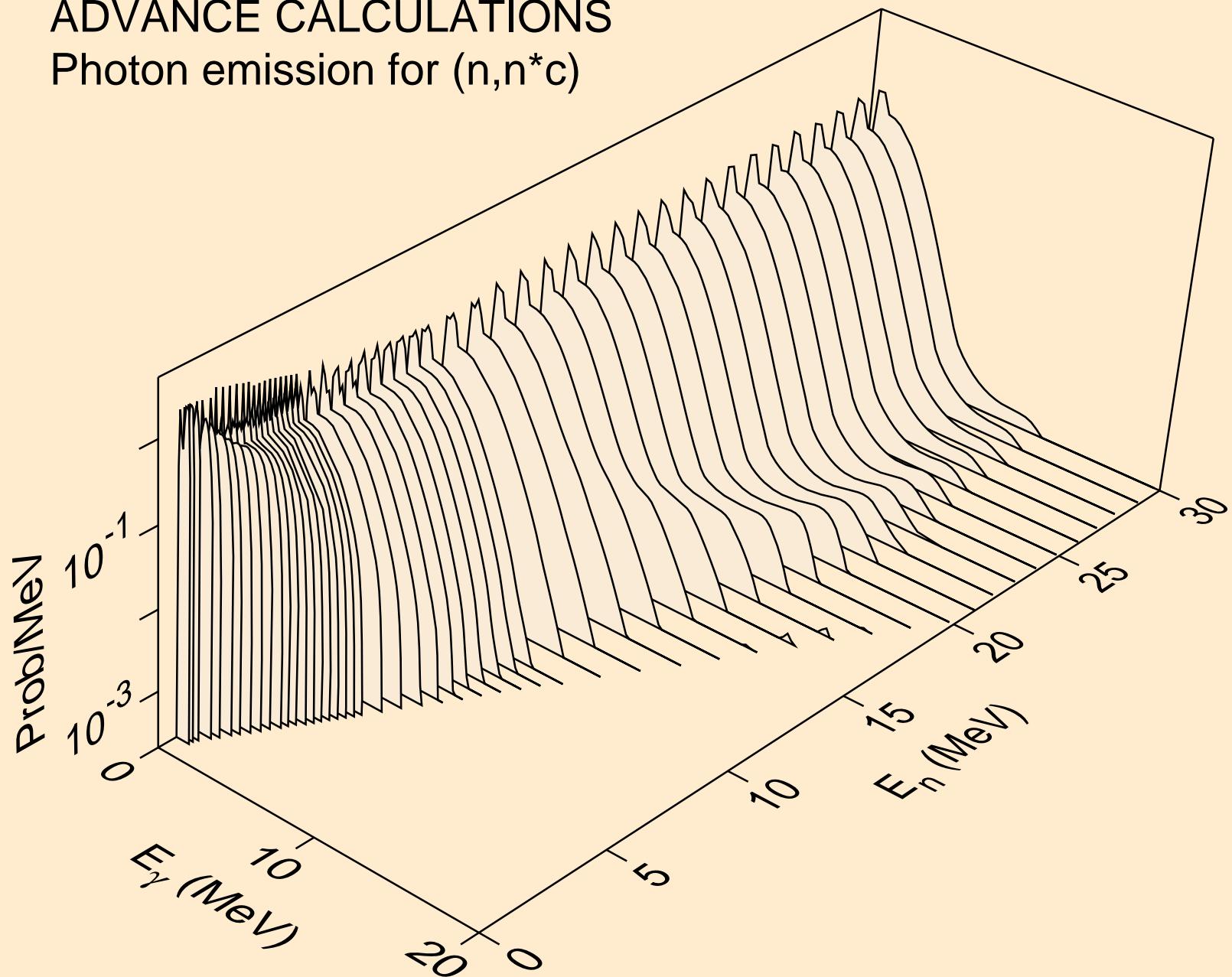
# ADVANCE CALCULATIONS

## Photon emission for (n,4n)



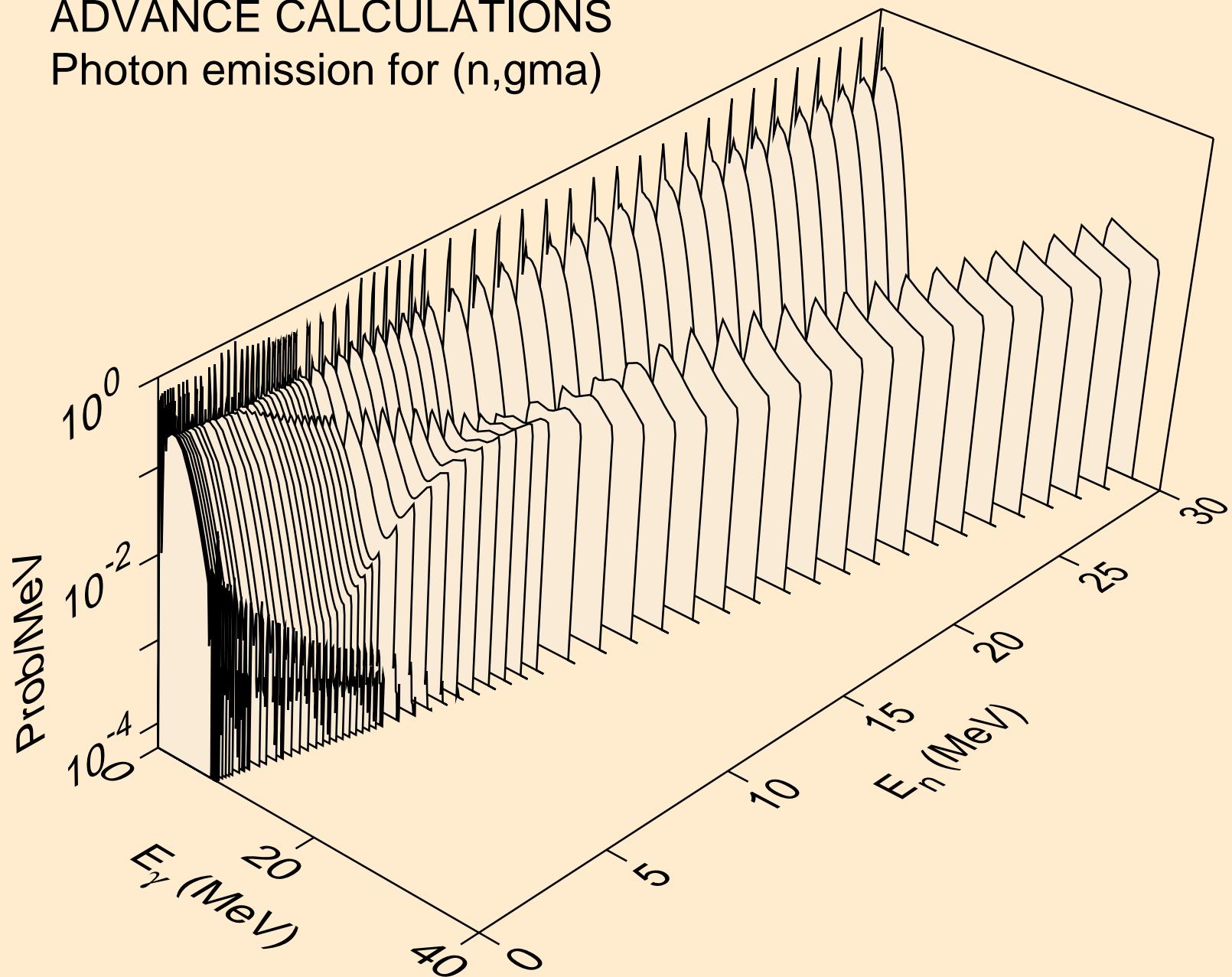
# ADVANCE CALCULATIONS

## Photon emission for $(n,n^*c)$



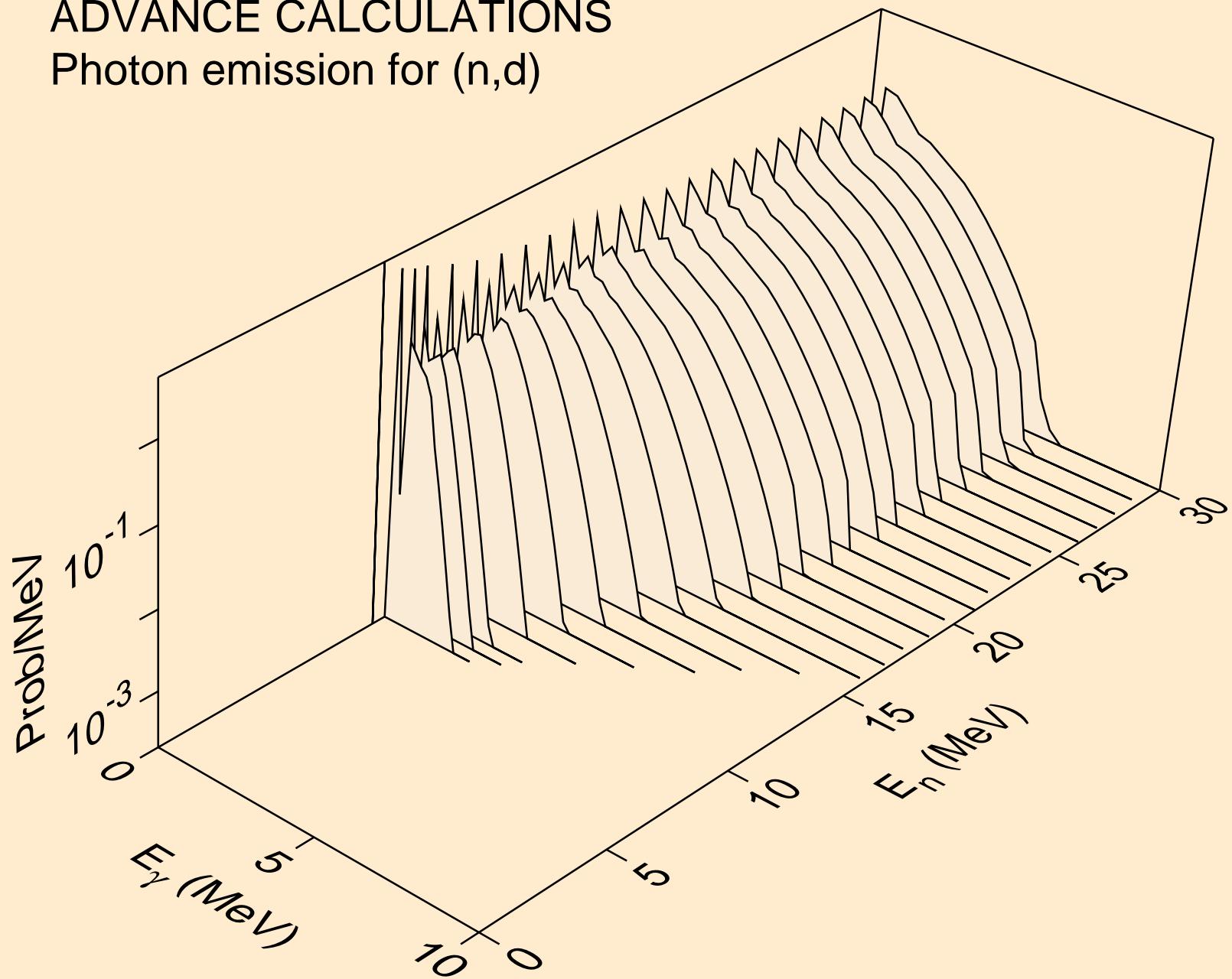
# ADVANCE CALCULATIONS

## Photon emission for (n,gma)



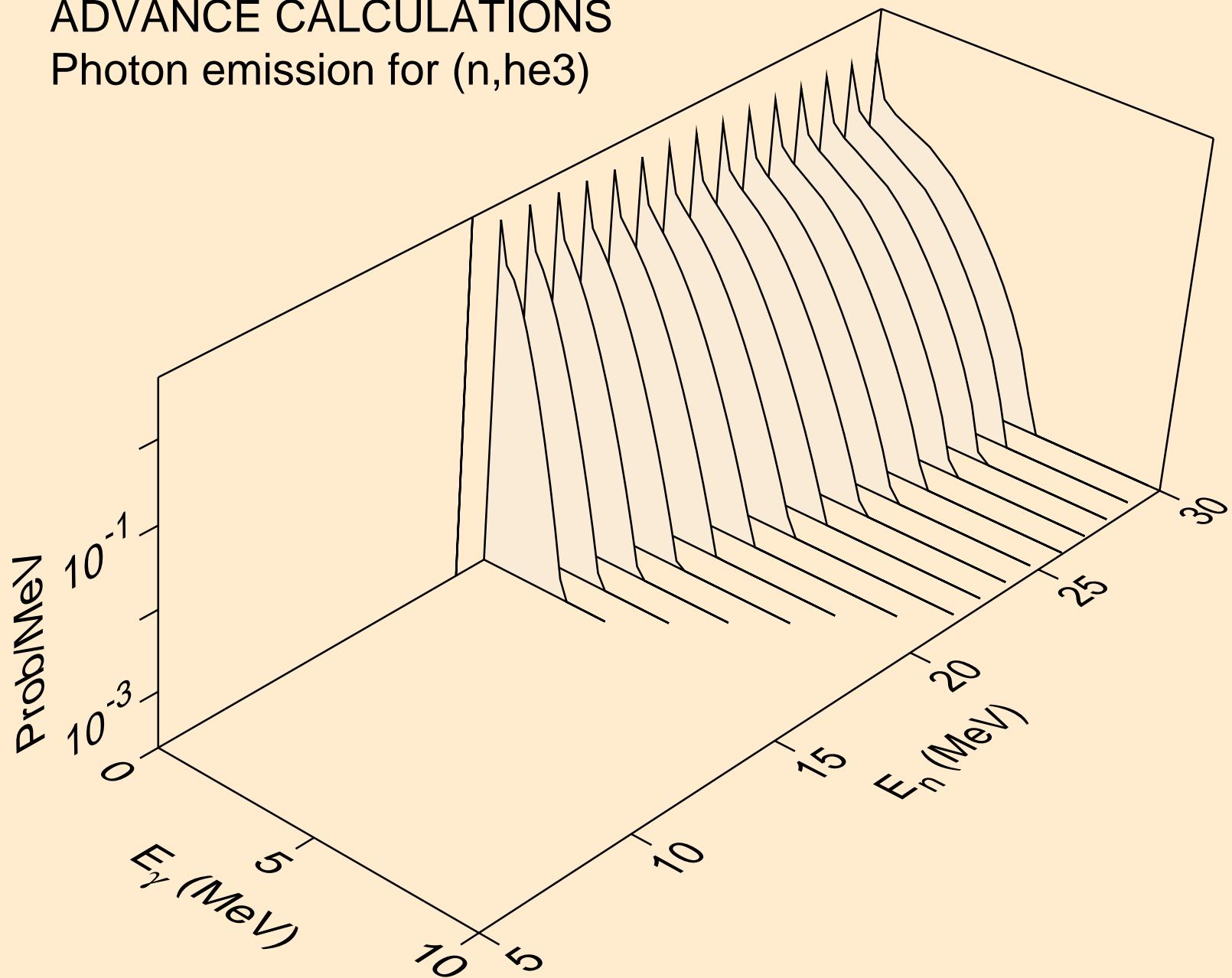
# ADVANCE CALCULATIONS

## Photon emission for (n,d)



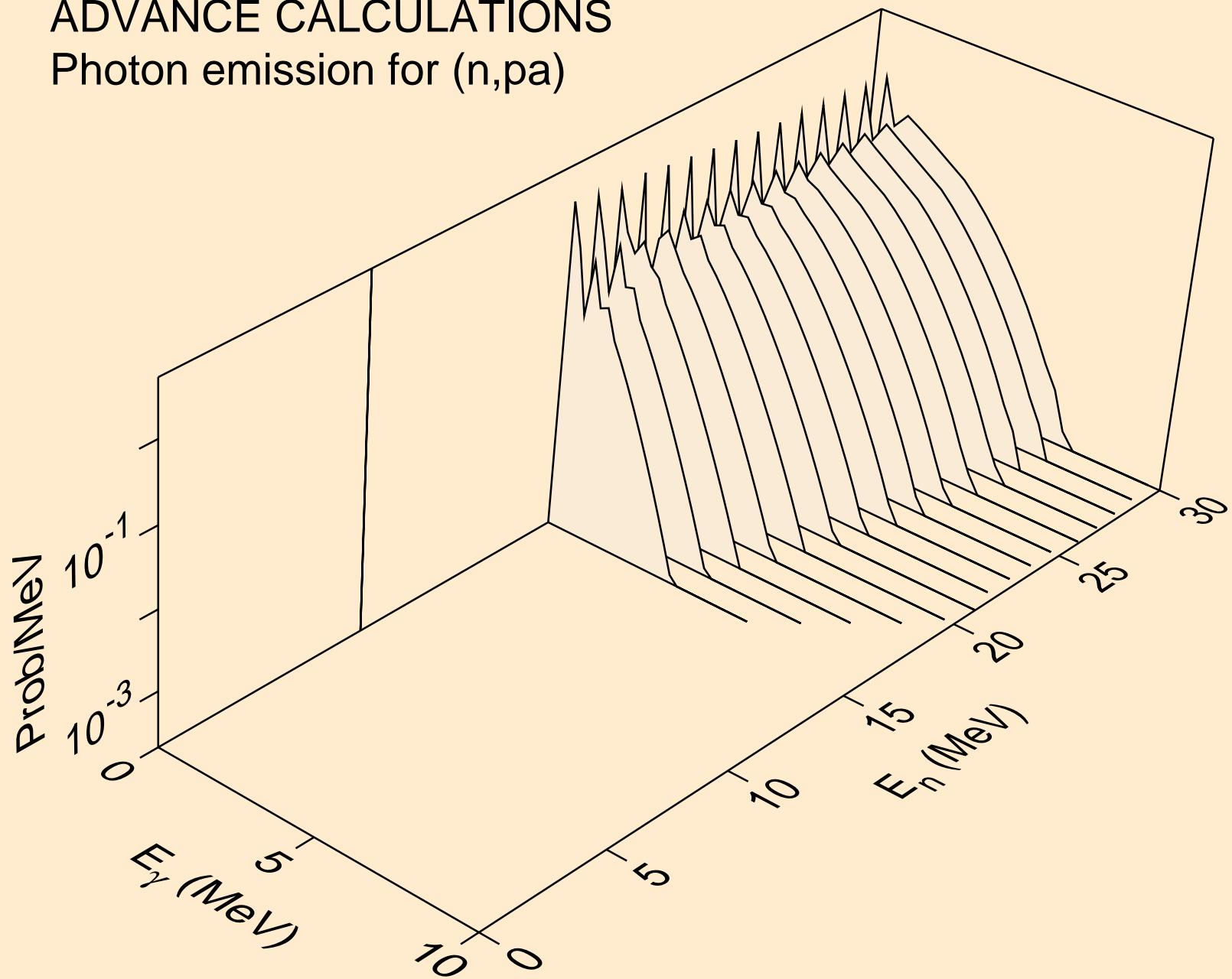
# ADVANCE CALCULATIONS

## Photon emission for (n,he3)



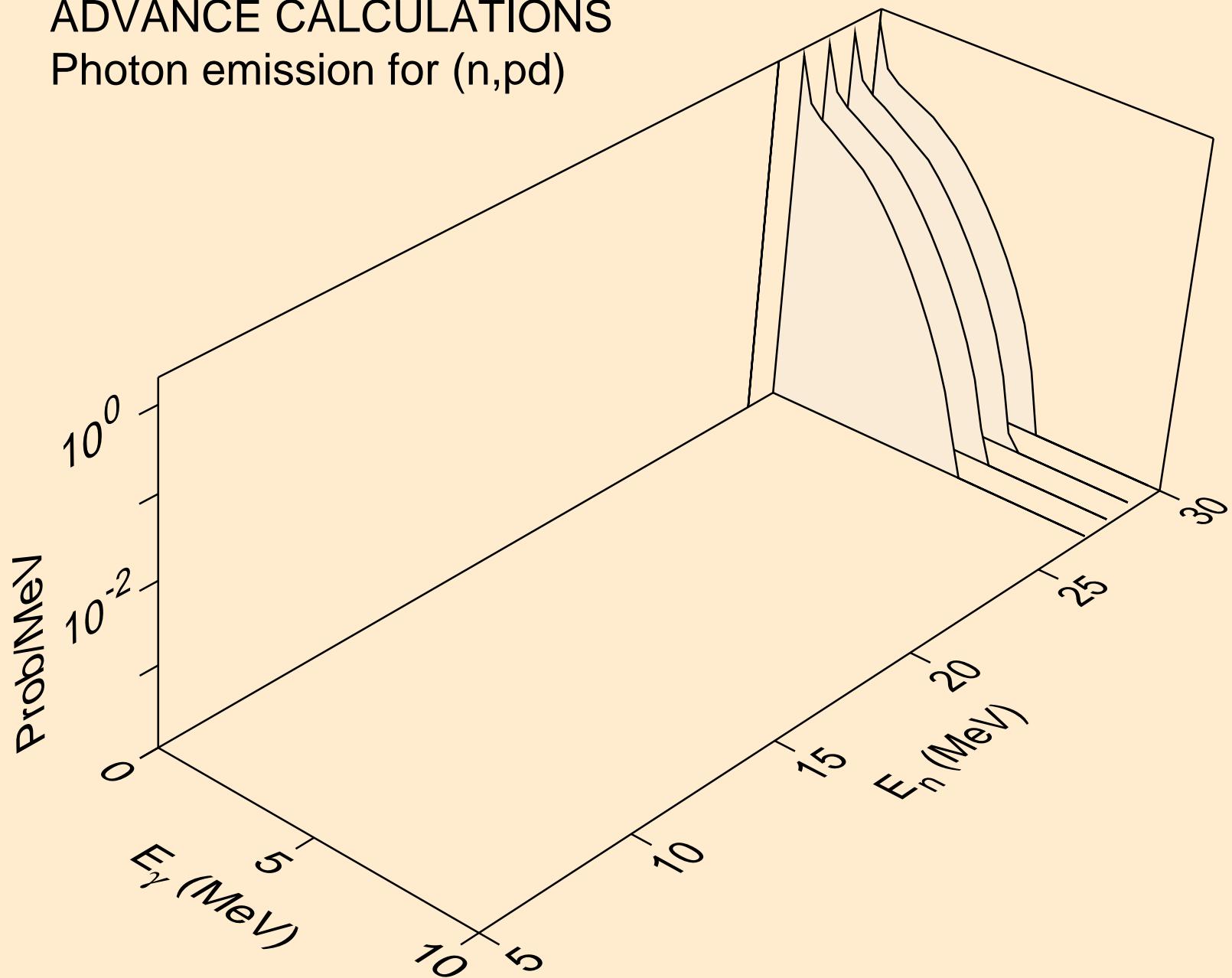
# ADVANCE CALCULATIONS

## Photon emission for (n,pa)



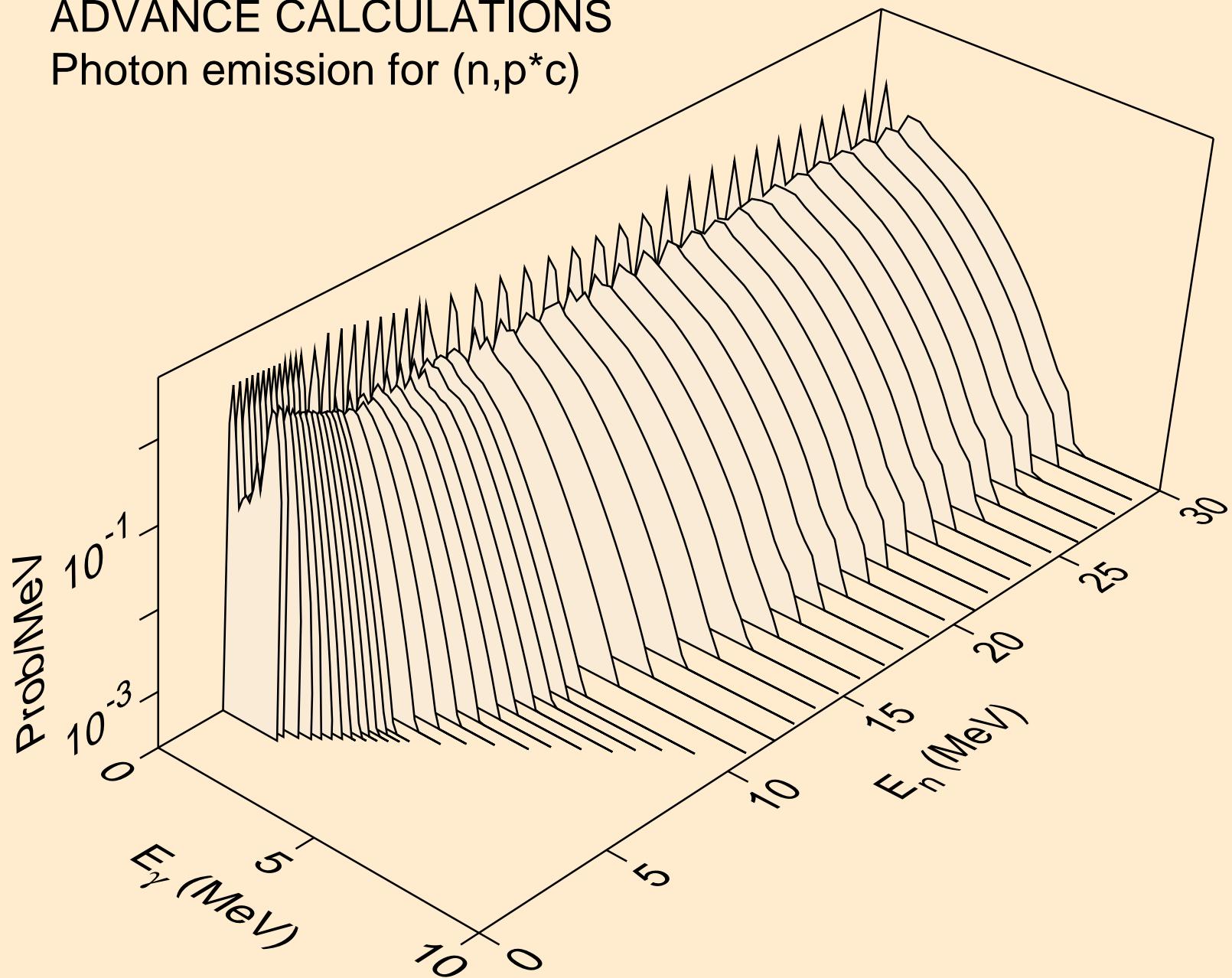
# ADVANCE CALCULATIONS

## Photon emission for (n,pd)



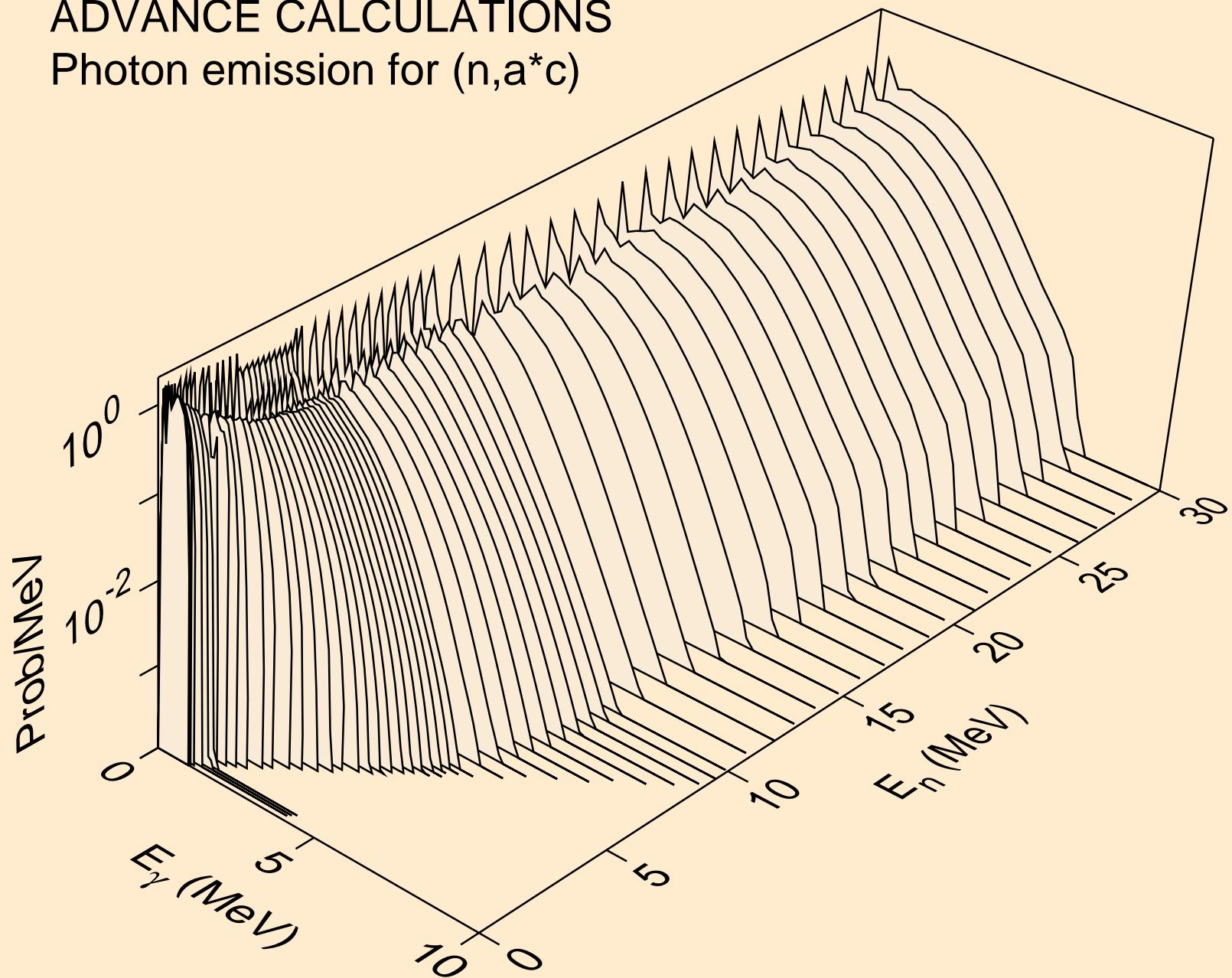
# ADVANCE CALCULATIONS

## Photon emission for $(n, p^* c)$



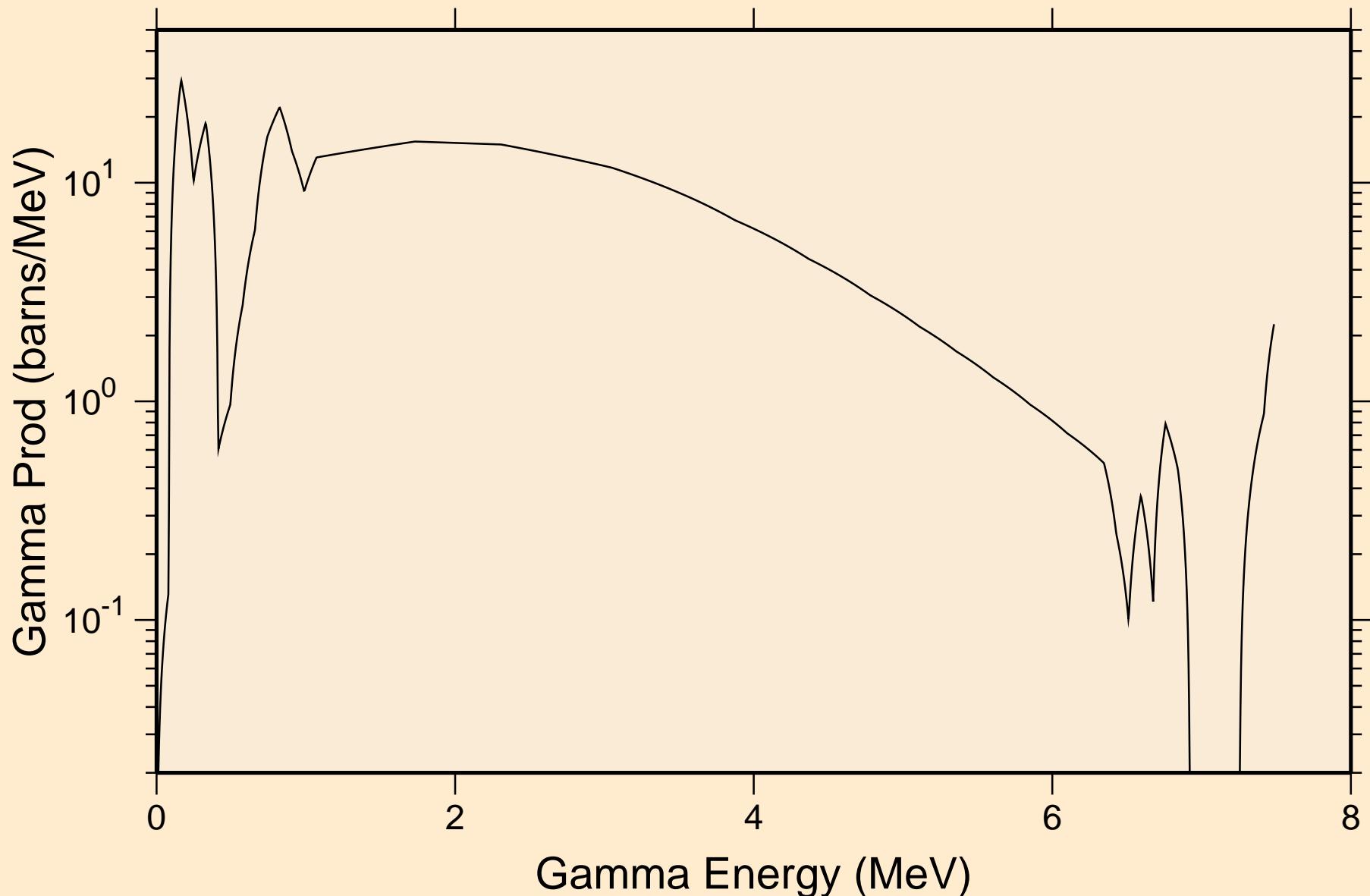
# ADVANCE CALCULATIONS

## Photon emission for $(n, a^*c)$

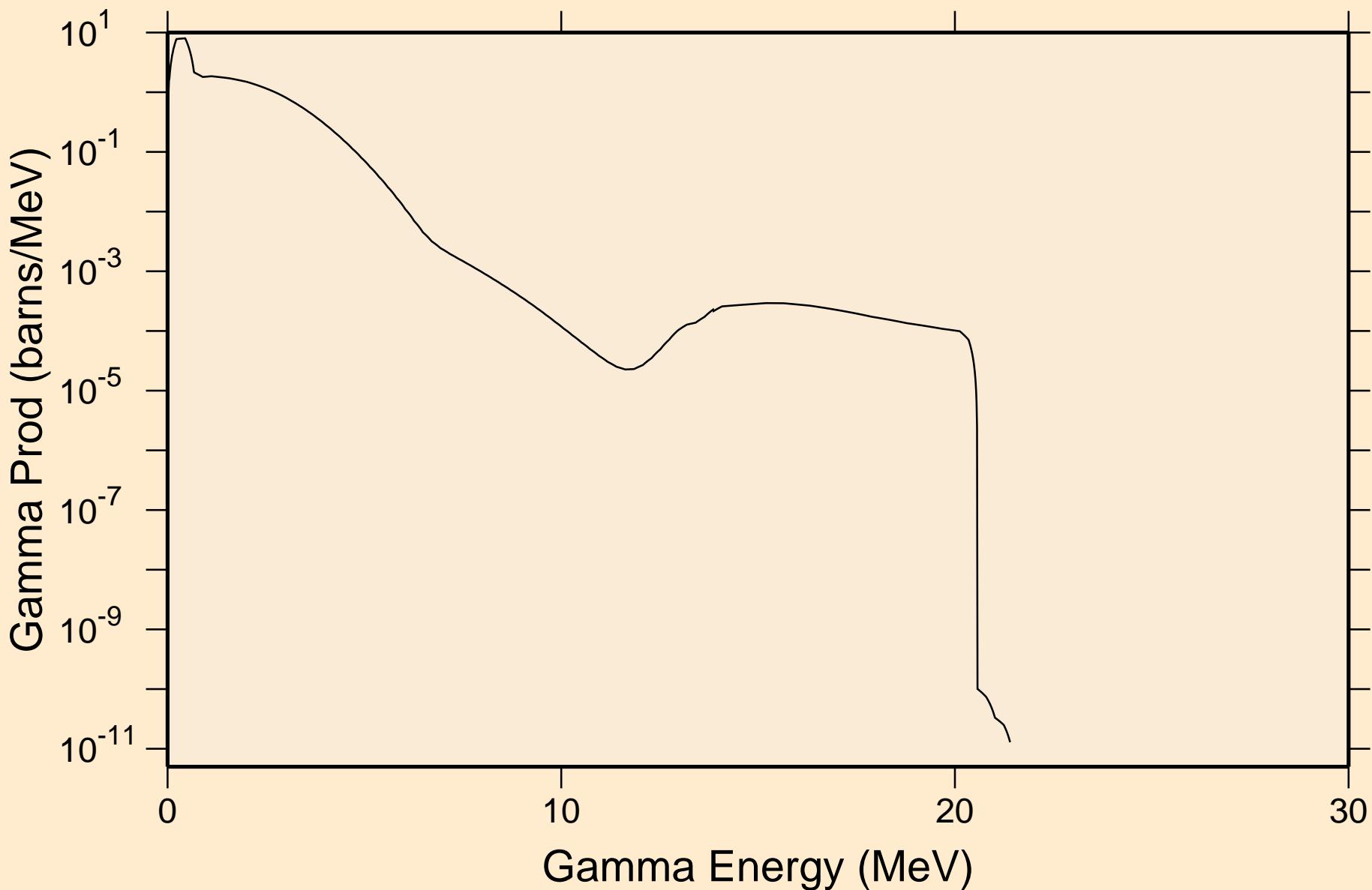


# ADVANCE CALCULATIONS

## thermal capture photon spectrum

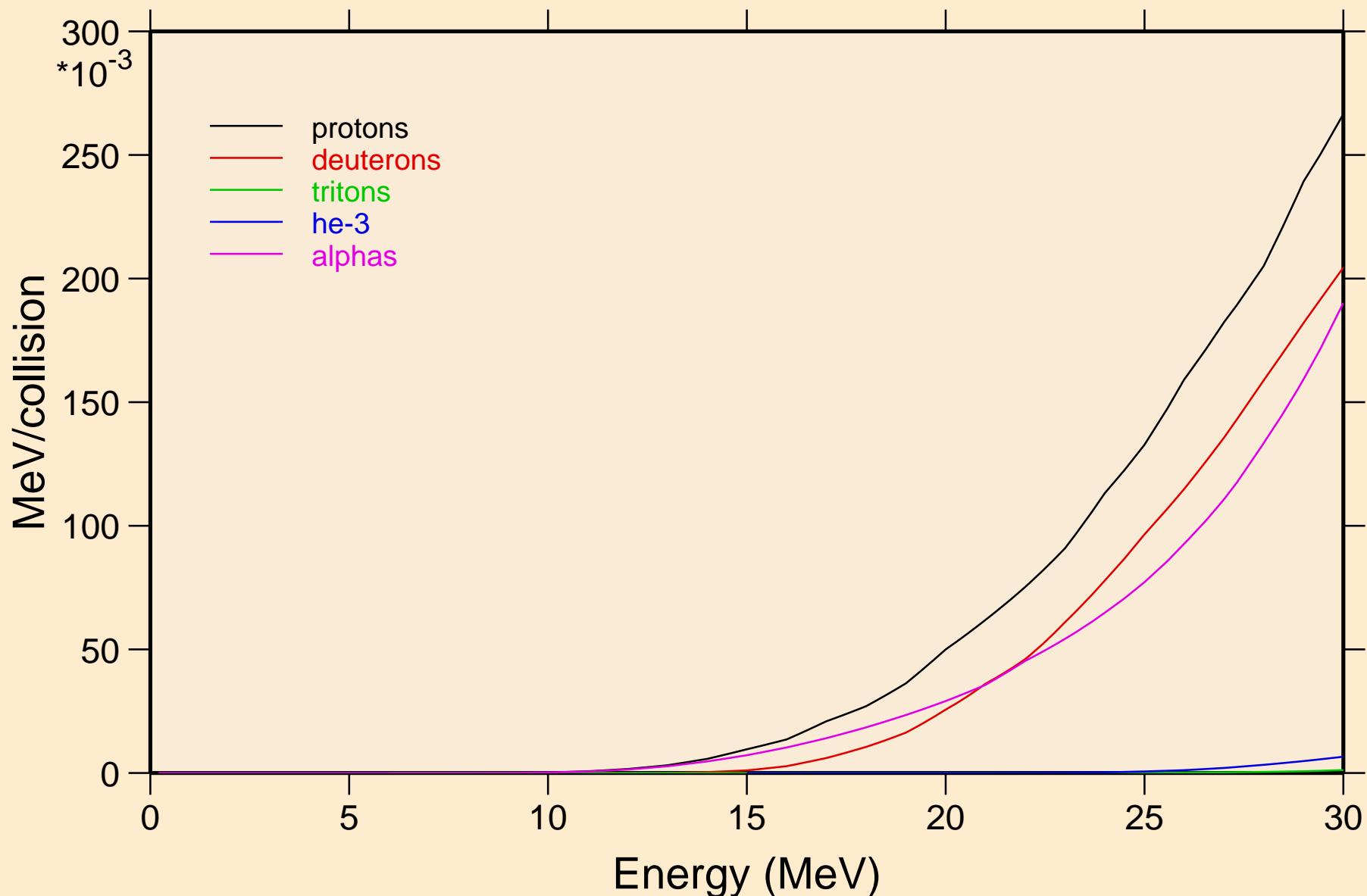


ADVANCE CALCULATIONS  
14 MeV photon spectrum



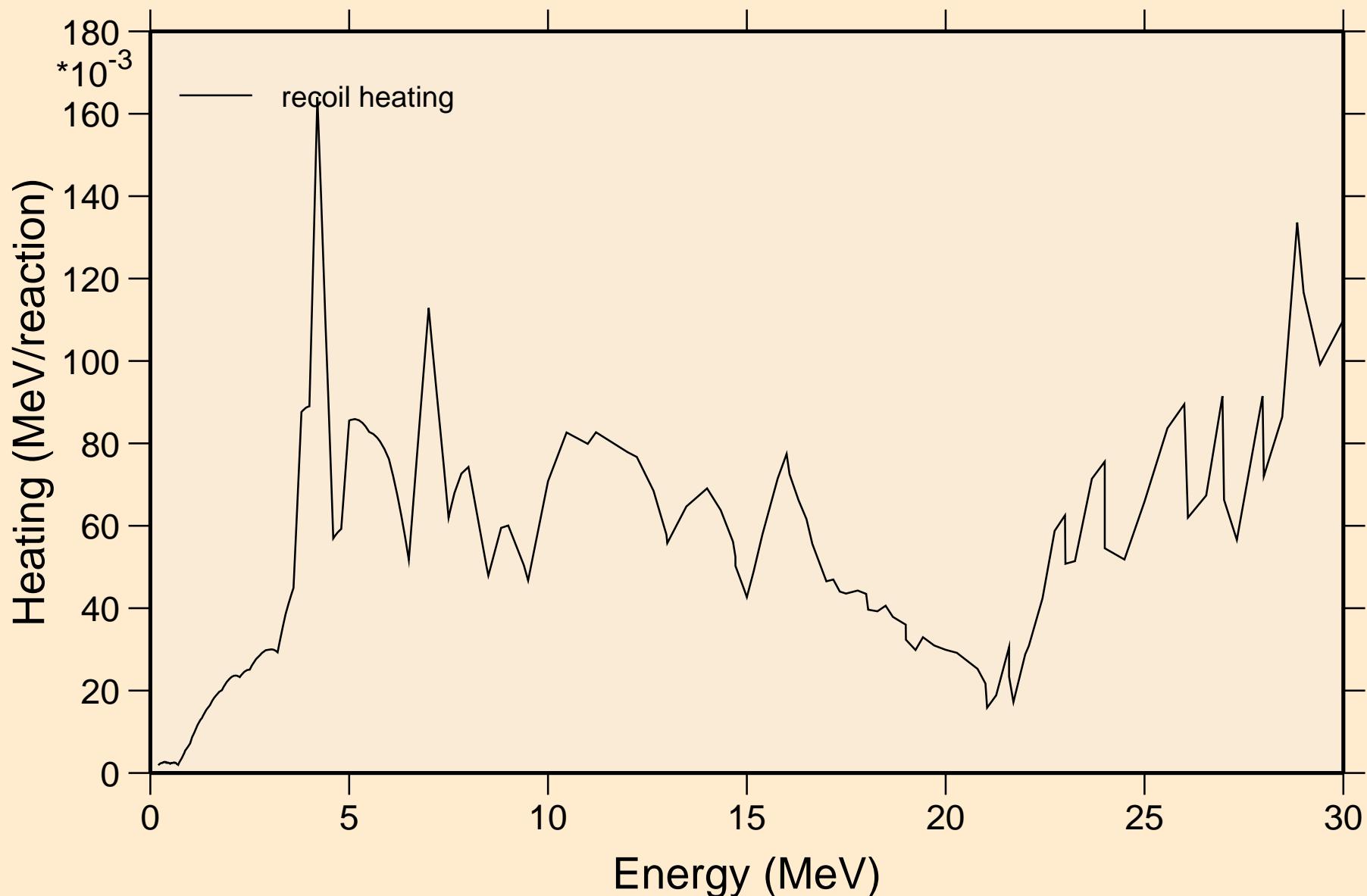
# ADVANCE CALCULATIONS

## Particle heating contributions



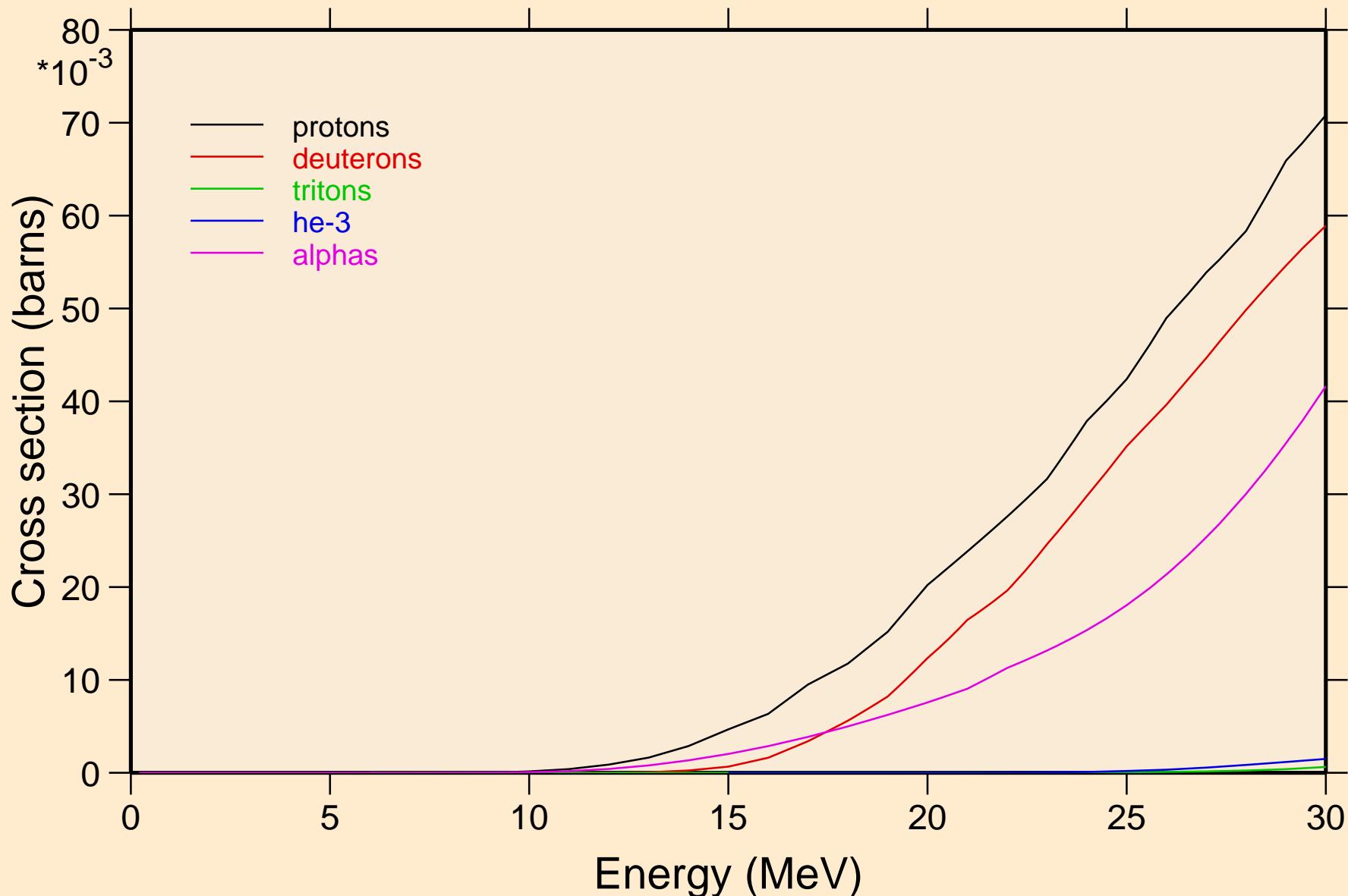
# ADVANCE CALCULATIONS

## Recoil Heating



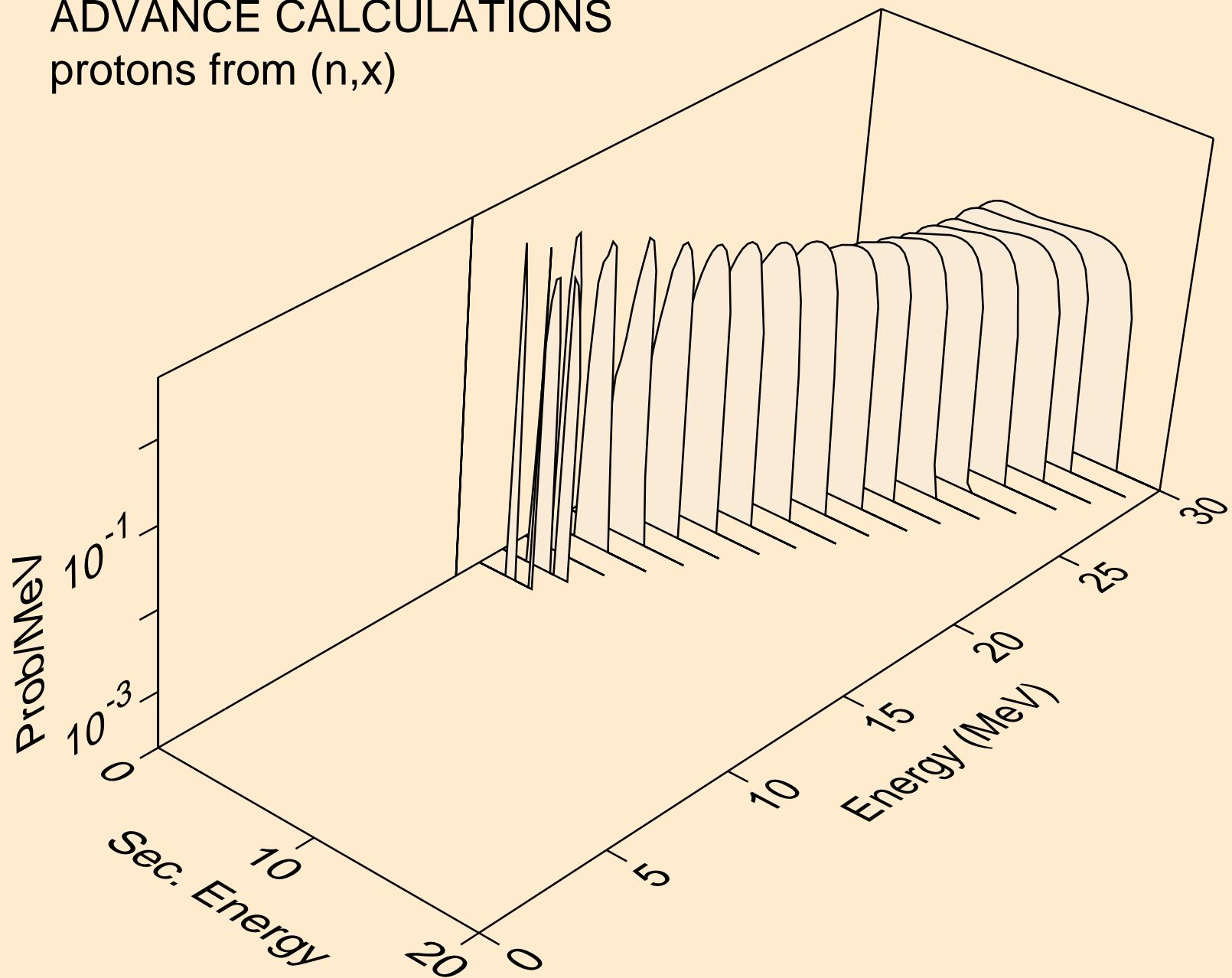
# ADVANCE CALCULATIONS

## Particle production cross sections



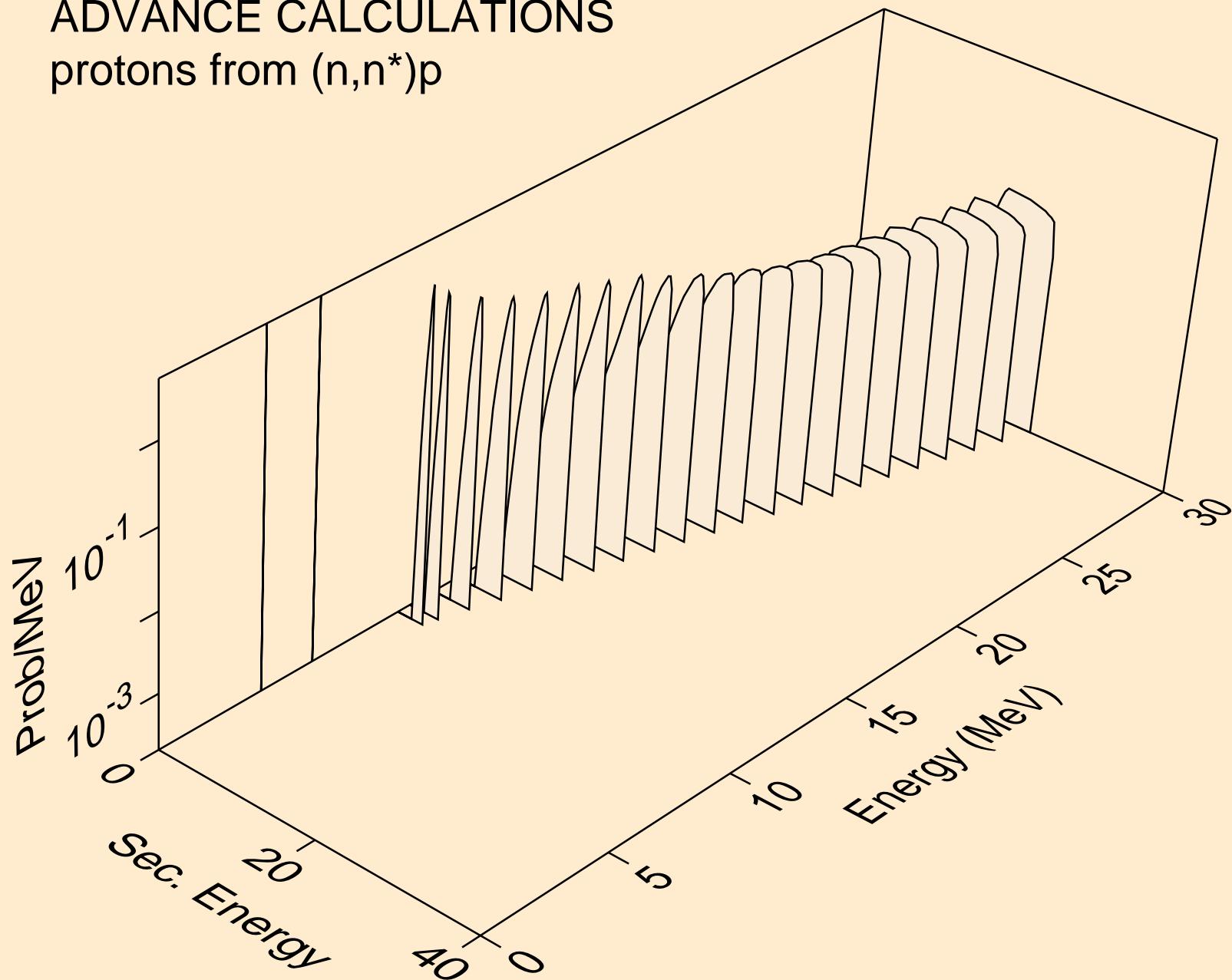
# ADVANCE CALCULATIONS

protons from ( $n, x$ )



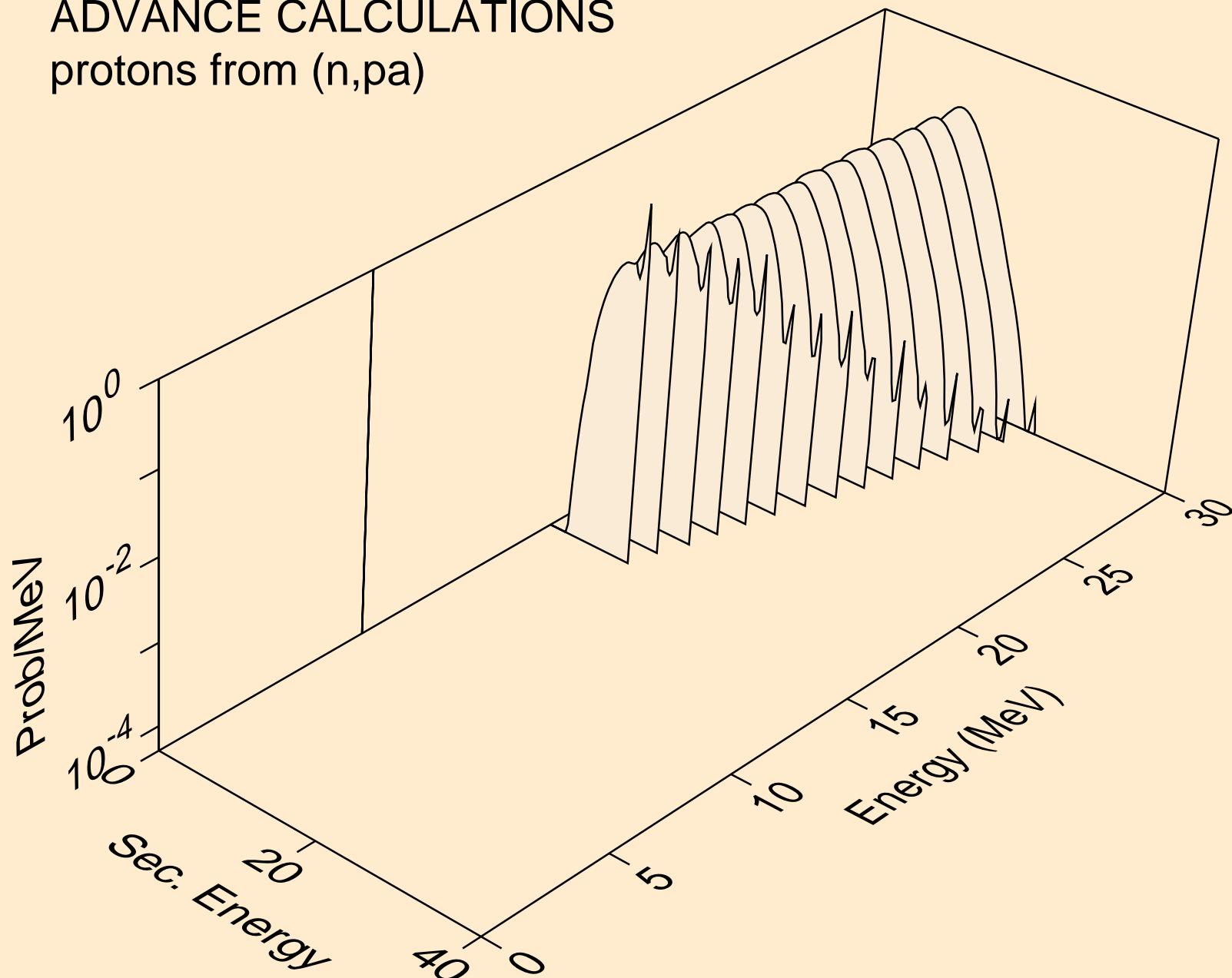
# ADVANCE CALCULATIONS

protons from  $(n,n^*)p$



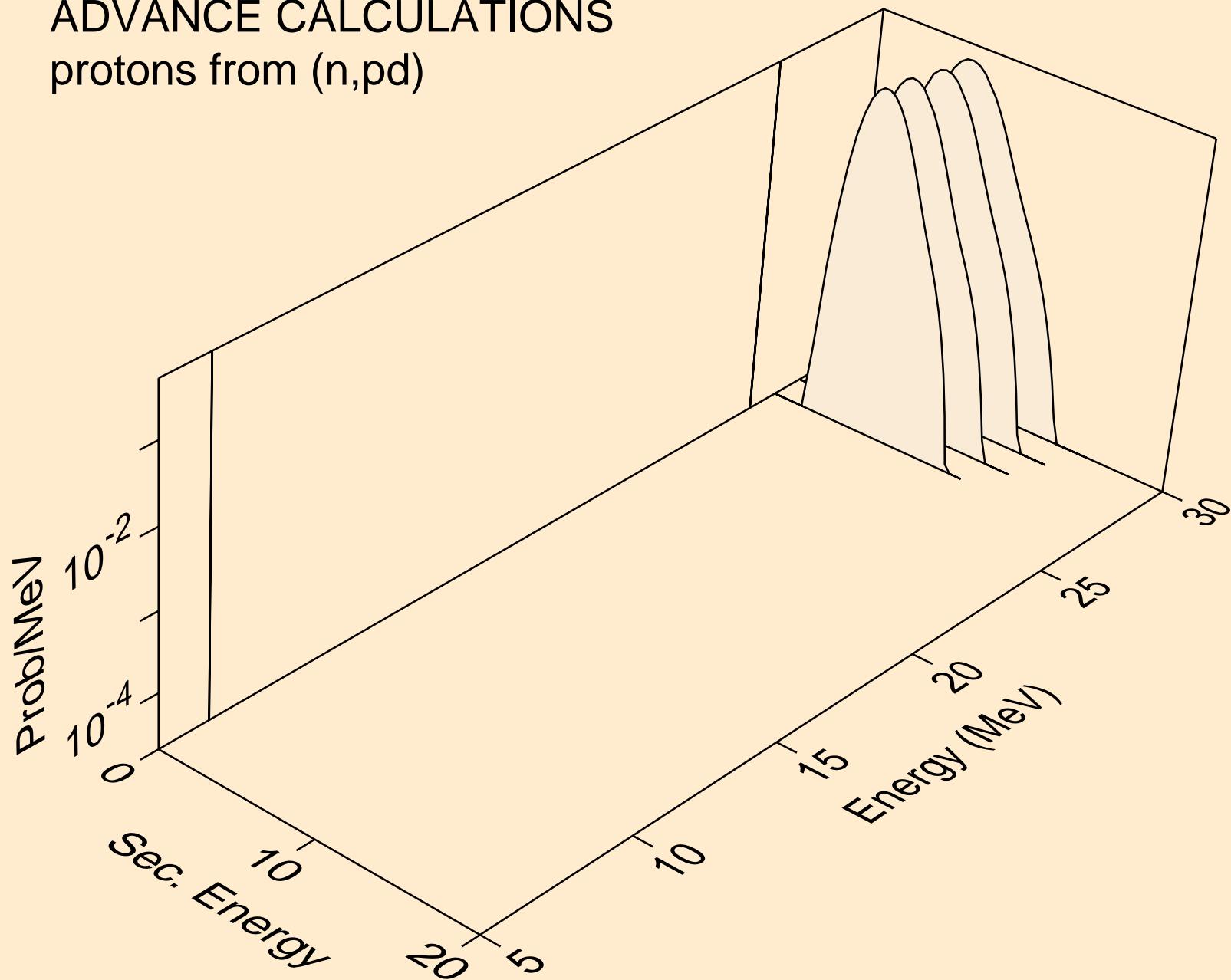
# ADVANCE CALCULATIONS

protons from (n,pa)



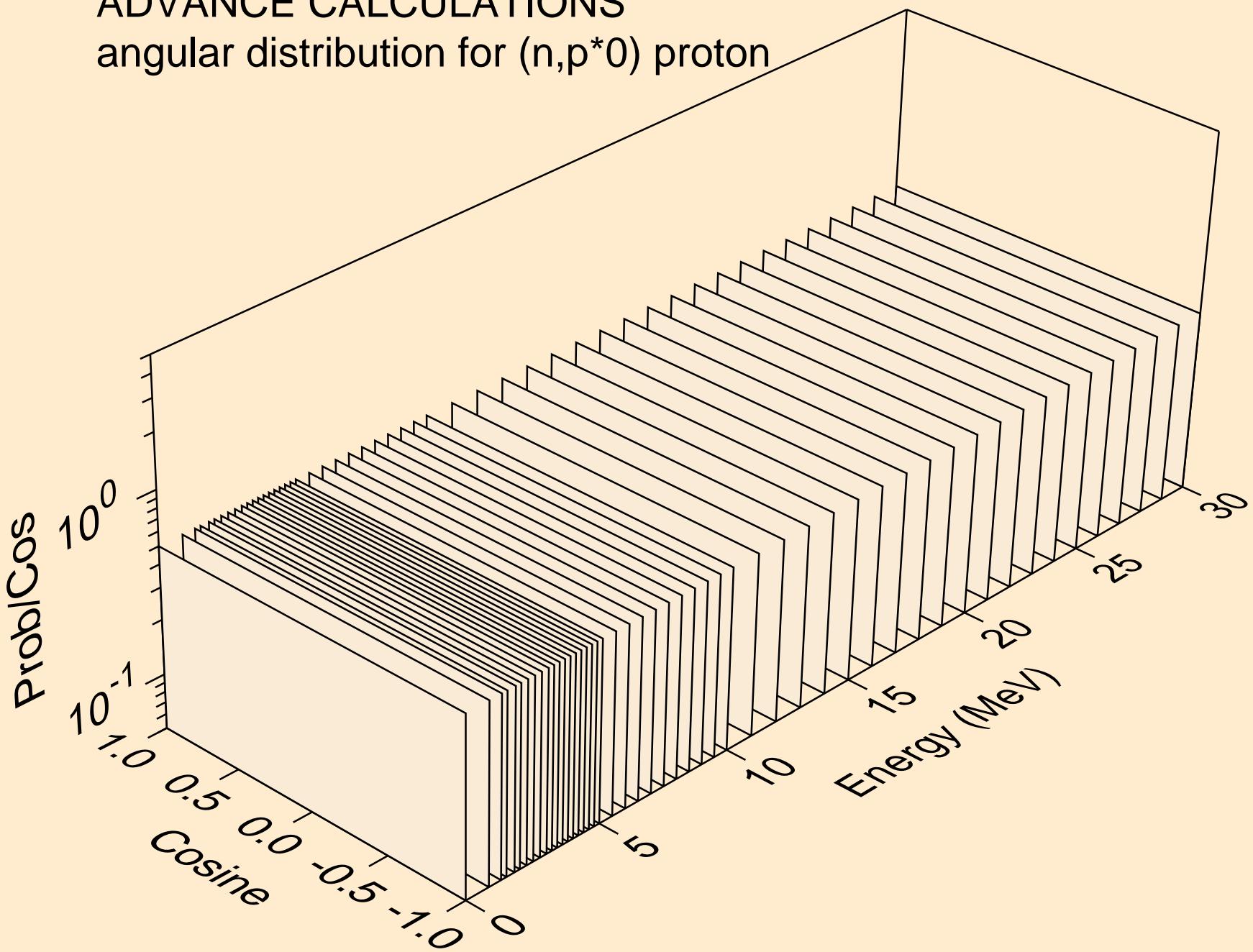
# ADVANCE CALCULATIONS

protons from (n,pd)



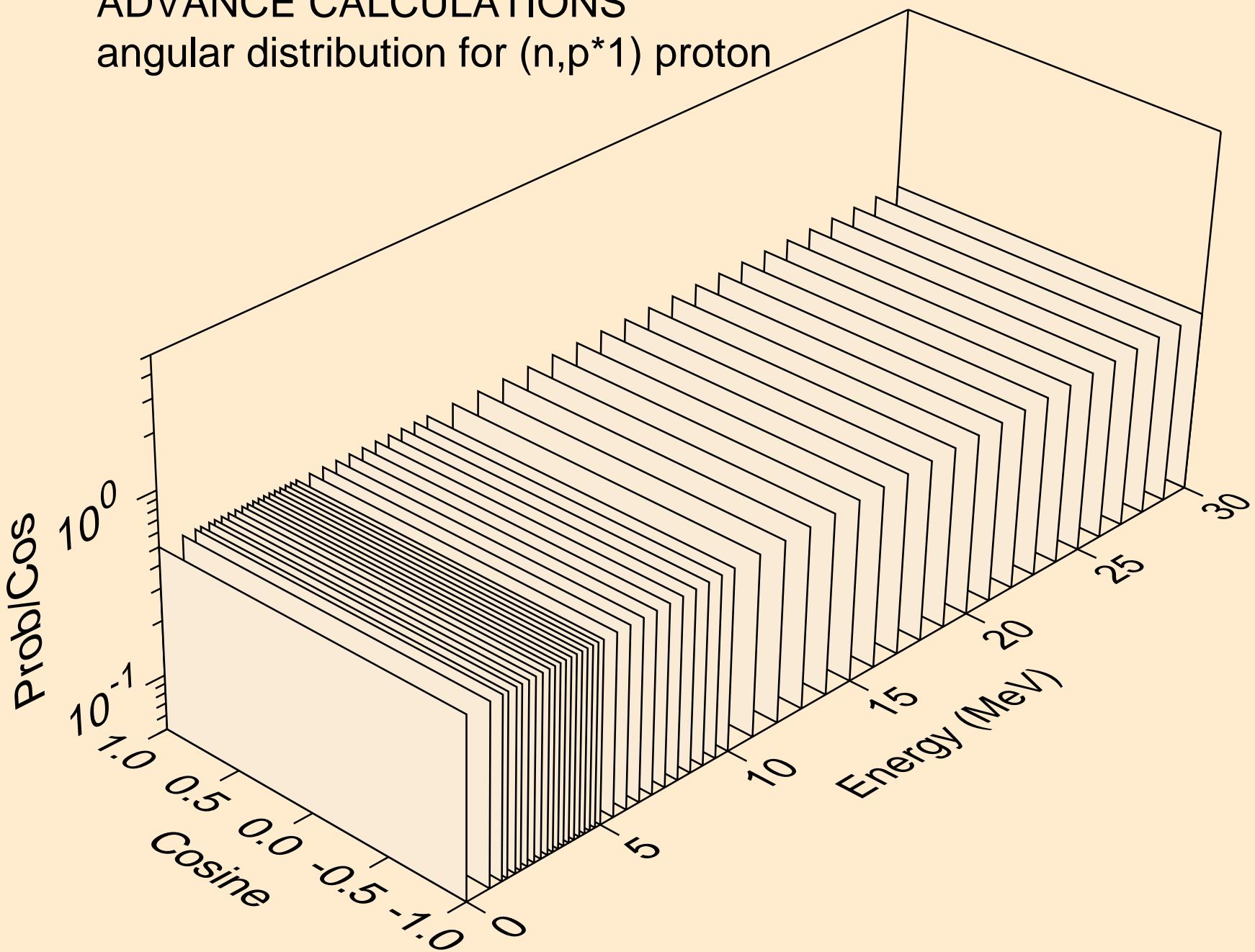
# ADVANCE CALCULATIONS

## angular distribution for $(n,p^*0)$ proton



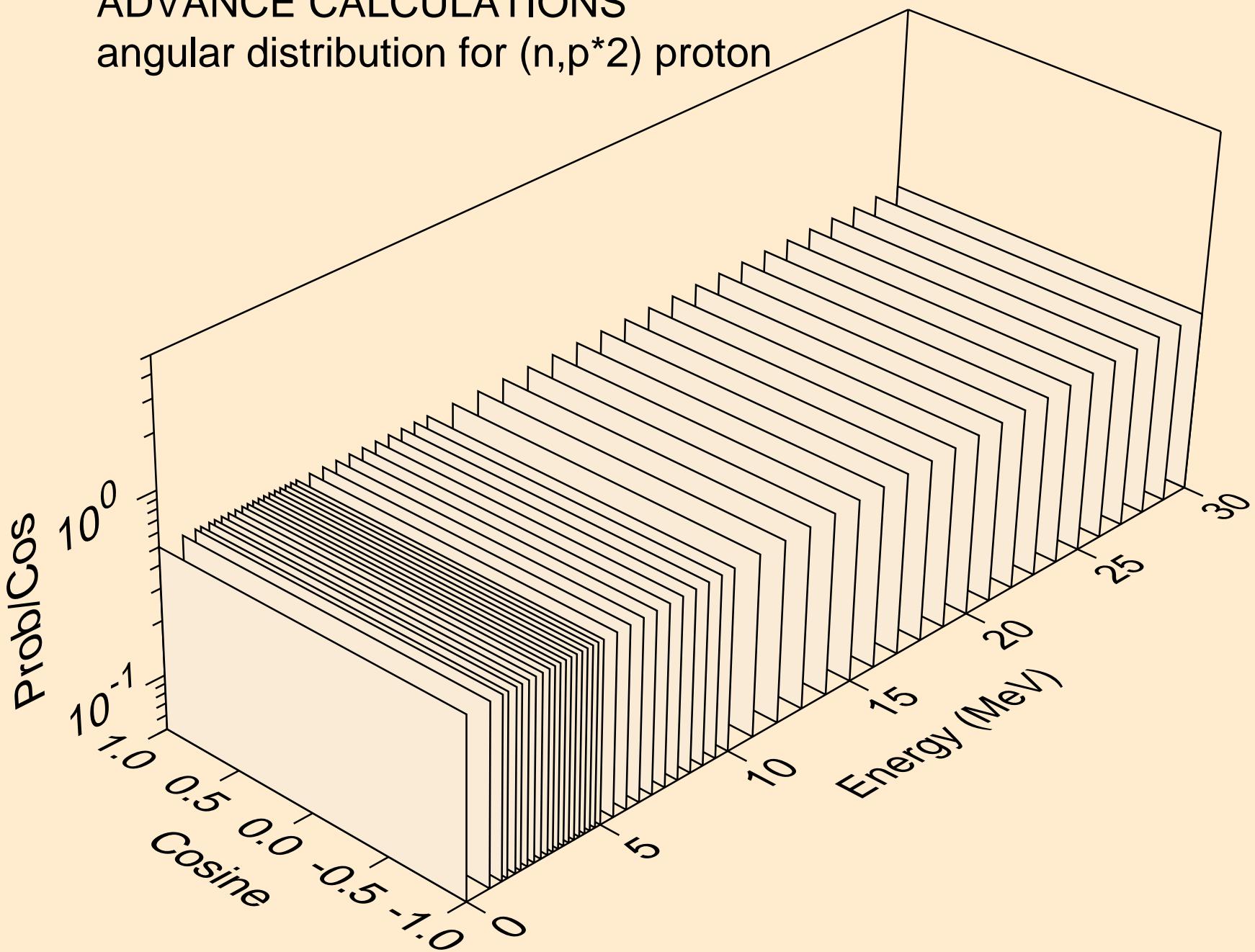
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*1$ ) proton



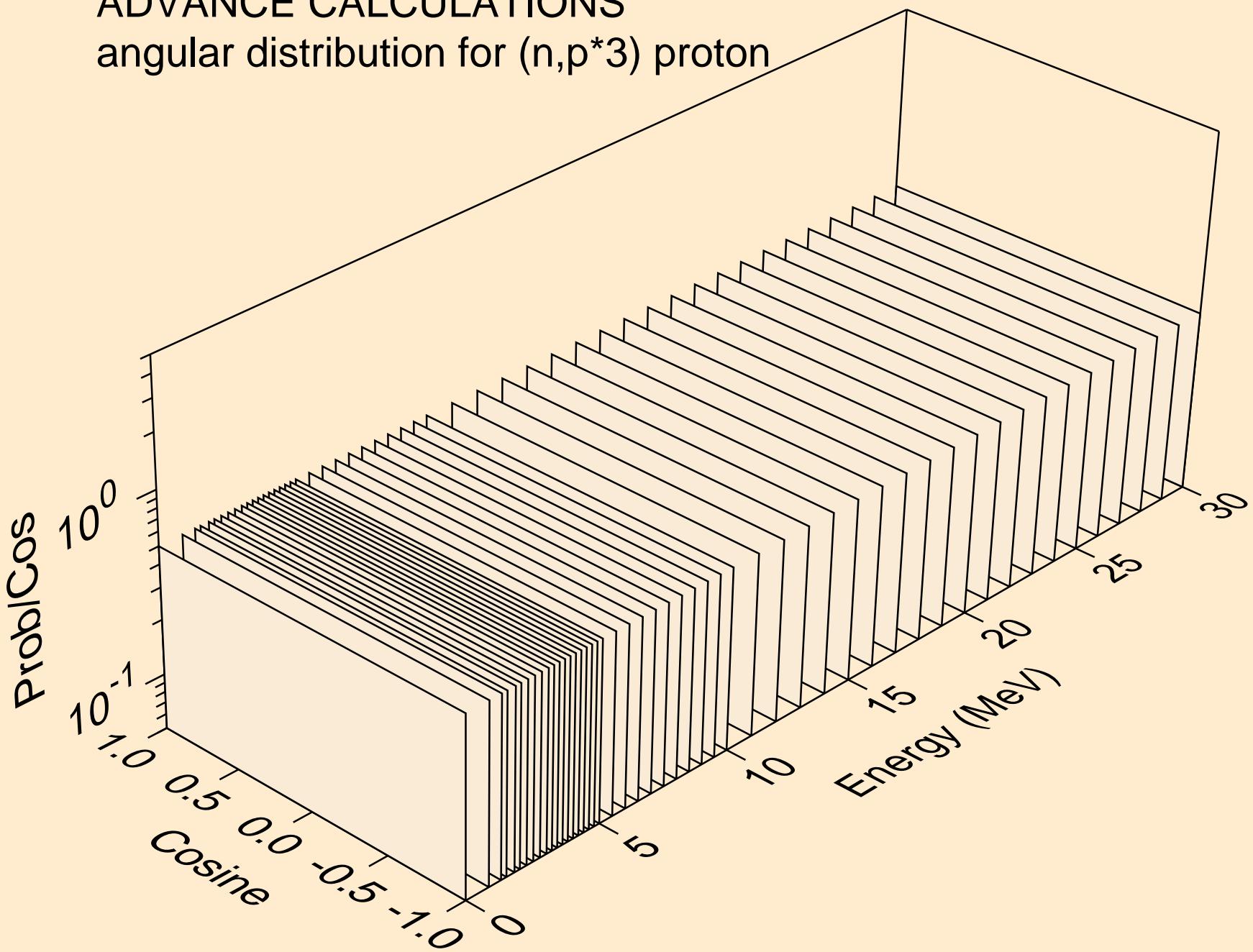
# ADVANCE CALCULATIONS

## angular distribution for $(n,p^*2)$ proton



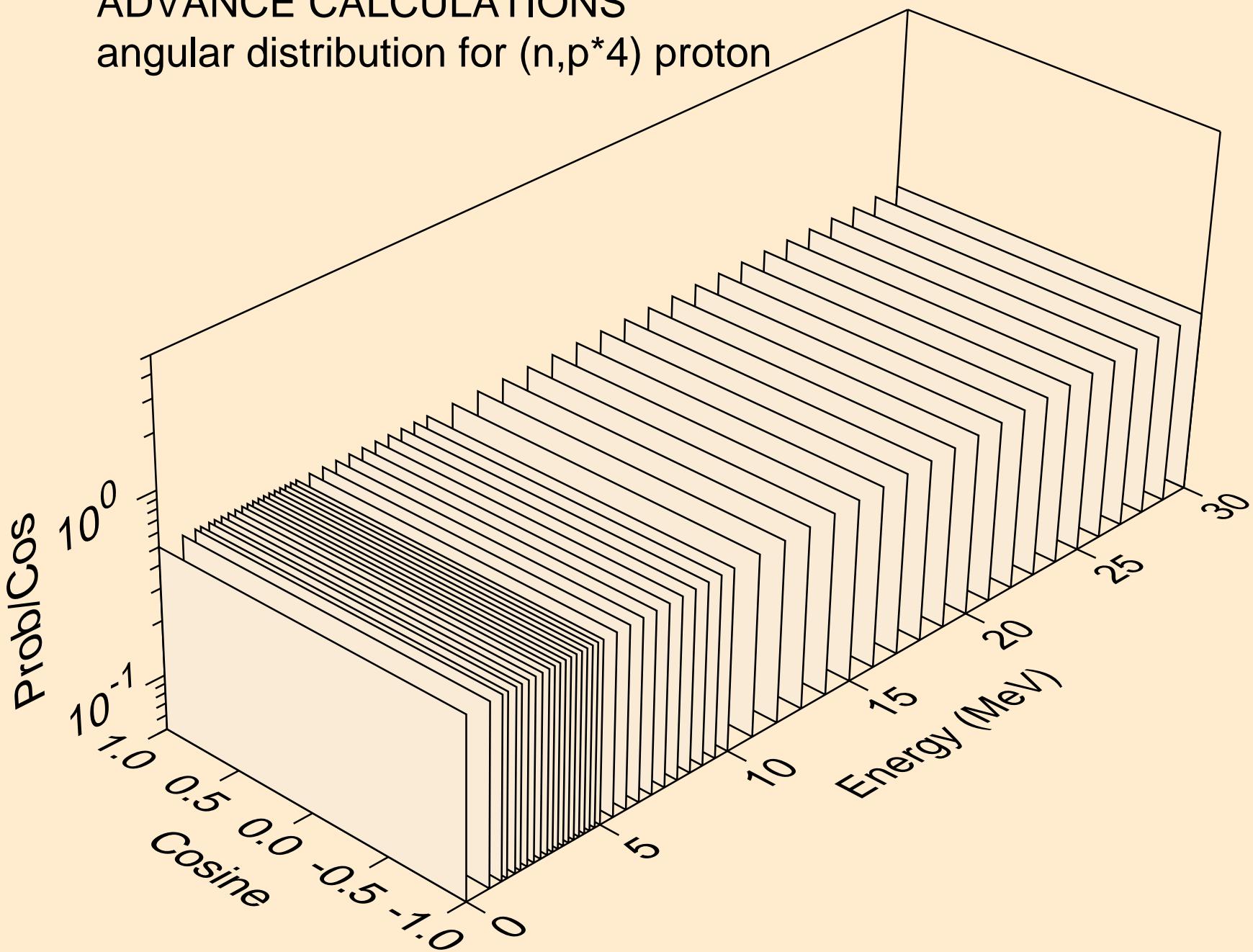
# ADVANCE CALCULATIONS

## angular distribution for $(n,p^*3)$ proton



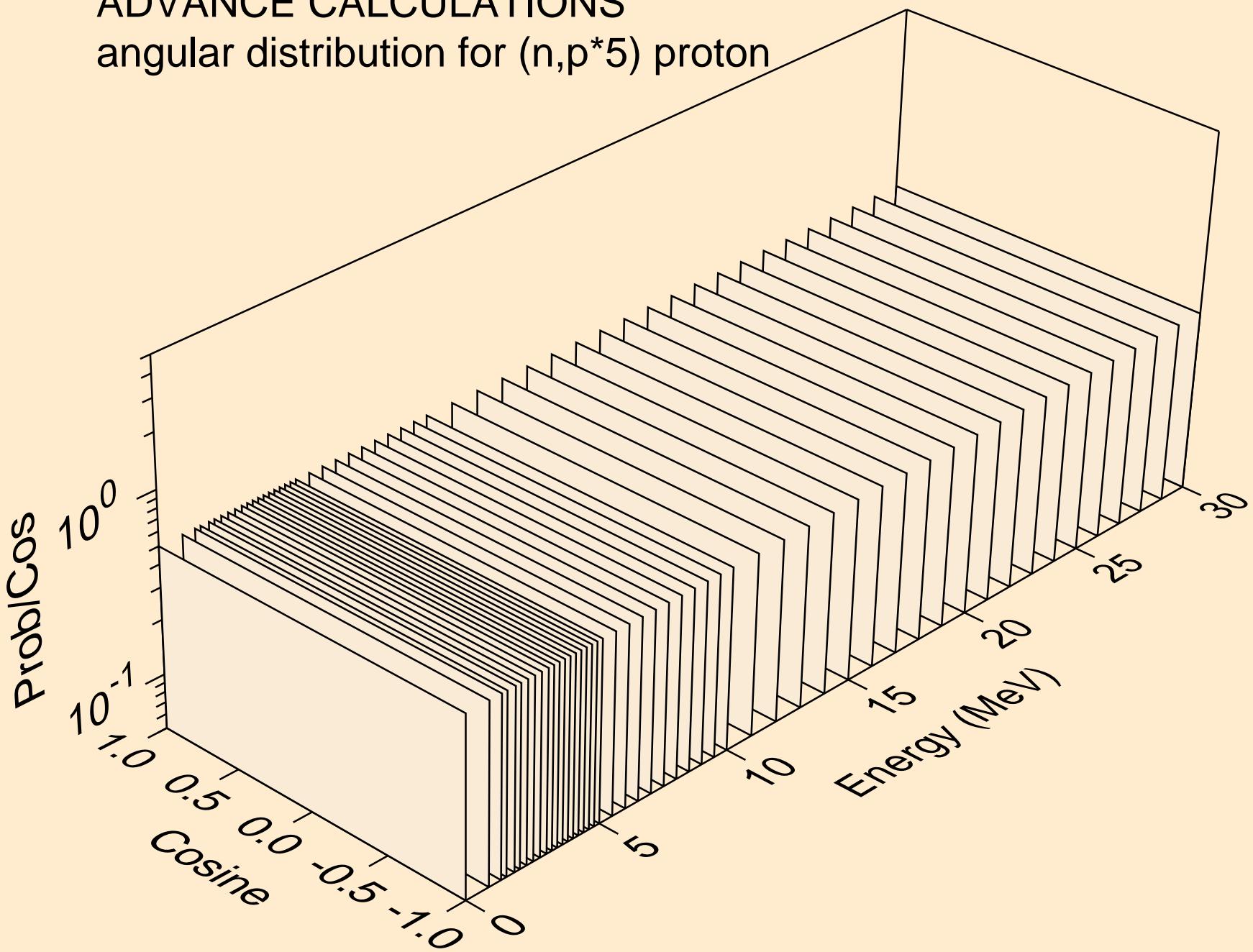
# ADVANCE CALCULATIONS

## angular distribution for $(n,p^*4)$ proton



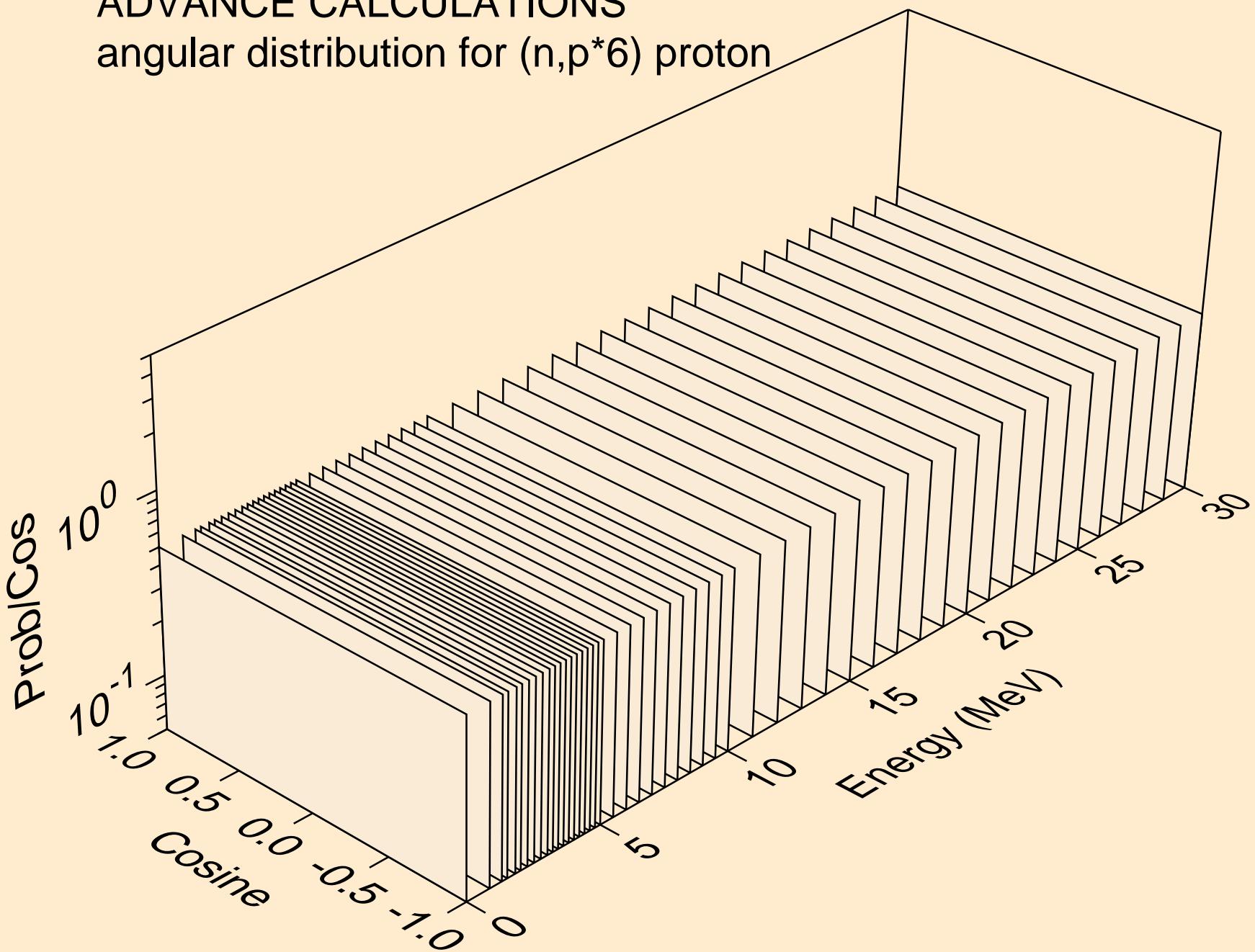
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*5$ ) proton



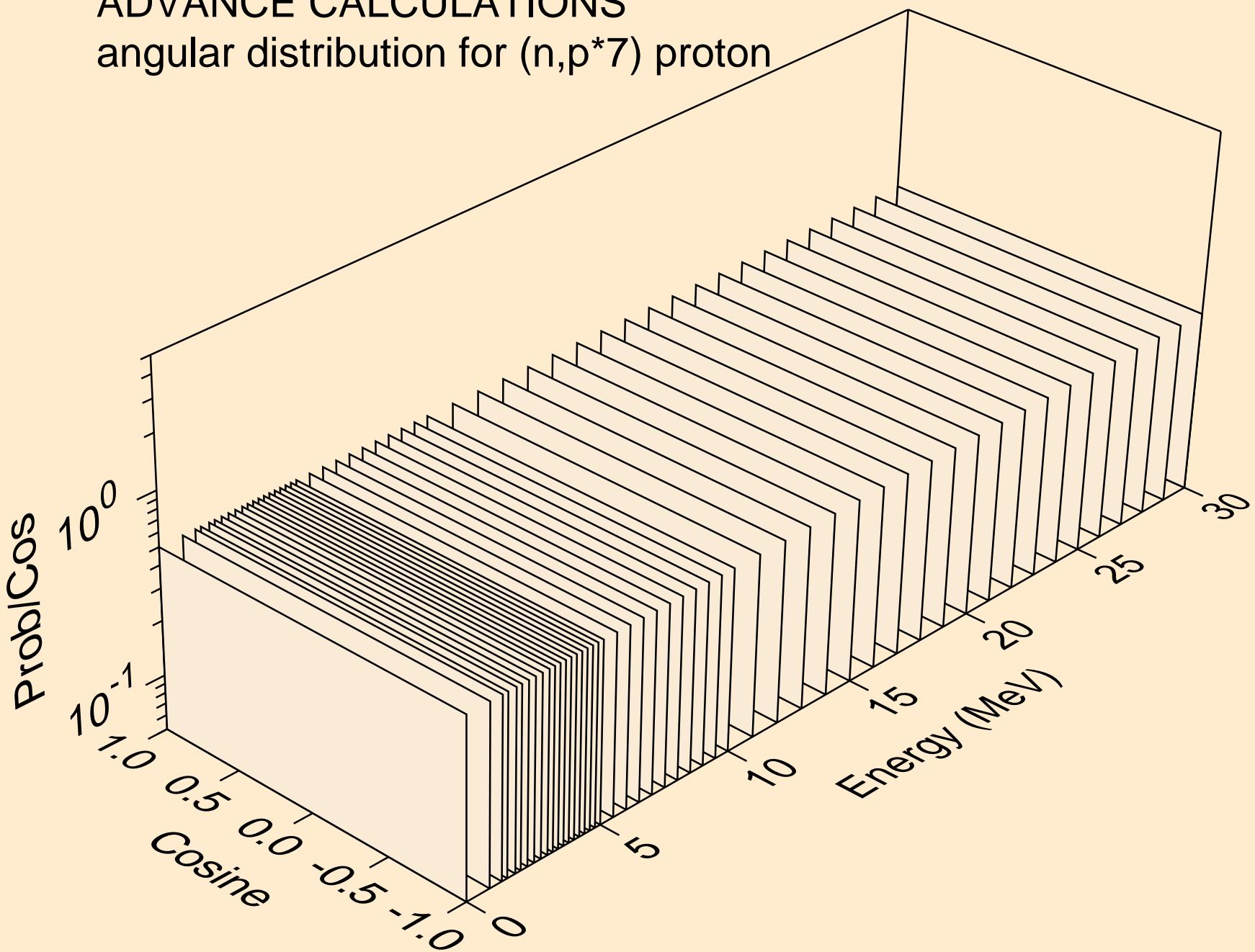
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*6$ ) proton



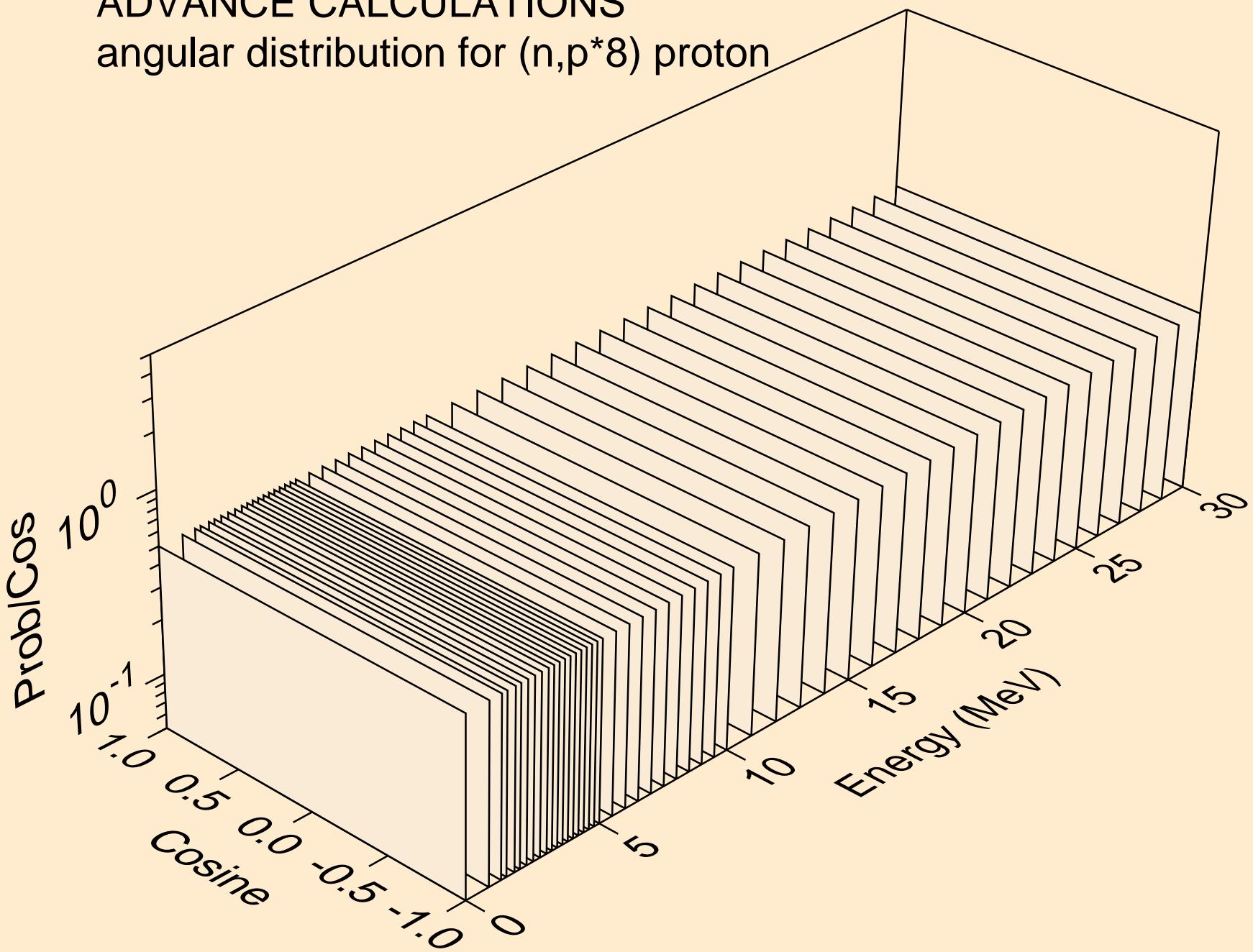
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*7$ ) proton



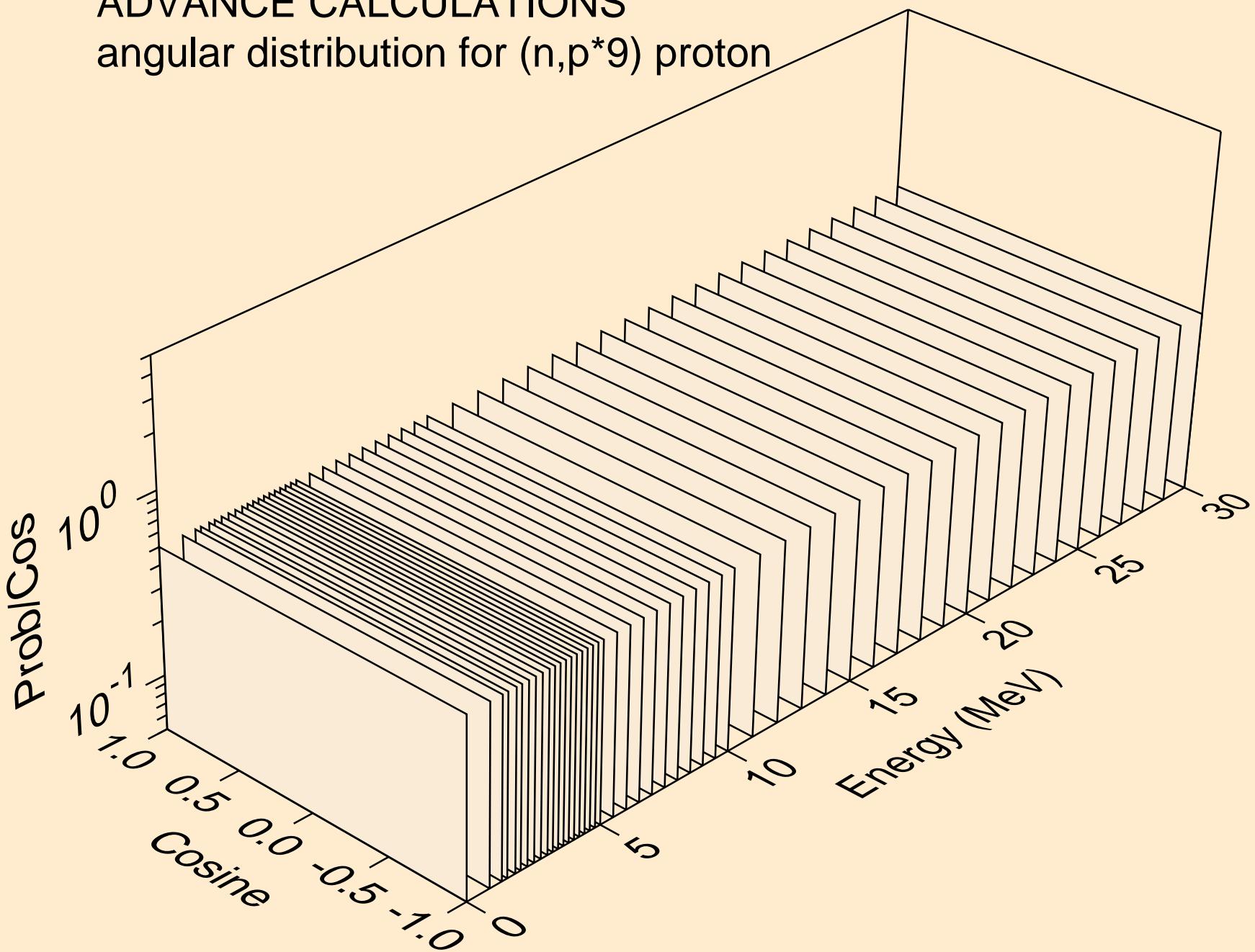
# ADVANCE CALCULATIONS

## angular distribution for (n,p\*8) proton



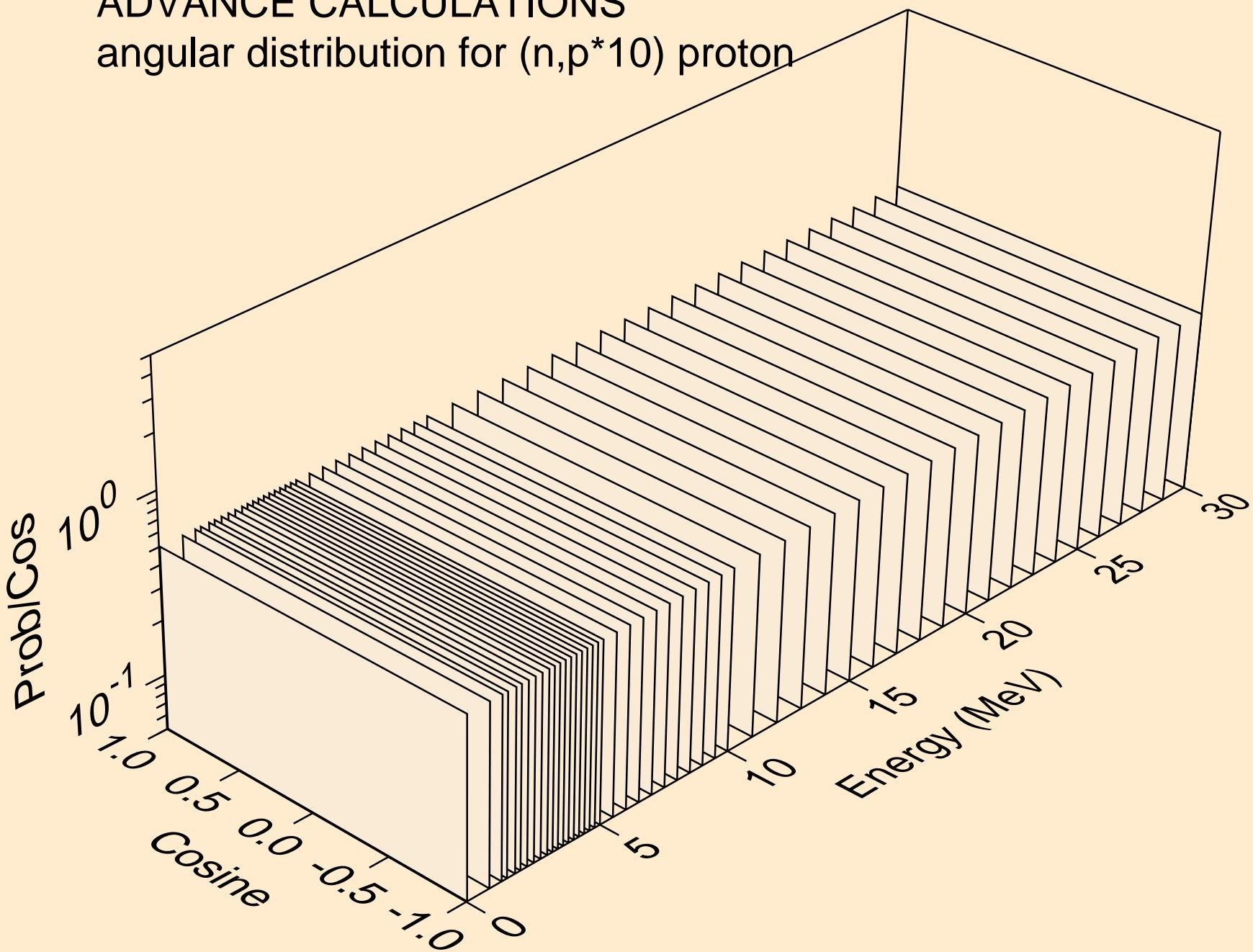
# ADVANCE CALCULATIONS

## angular distribution for $(n,p^*9)$ proton



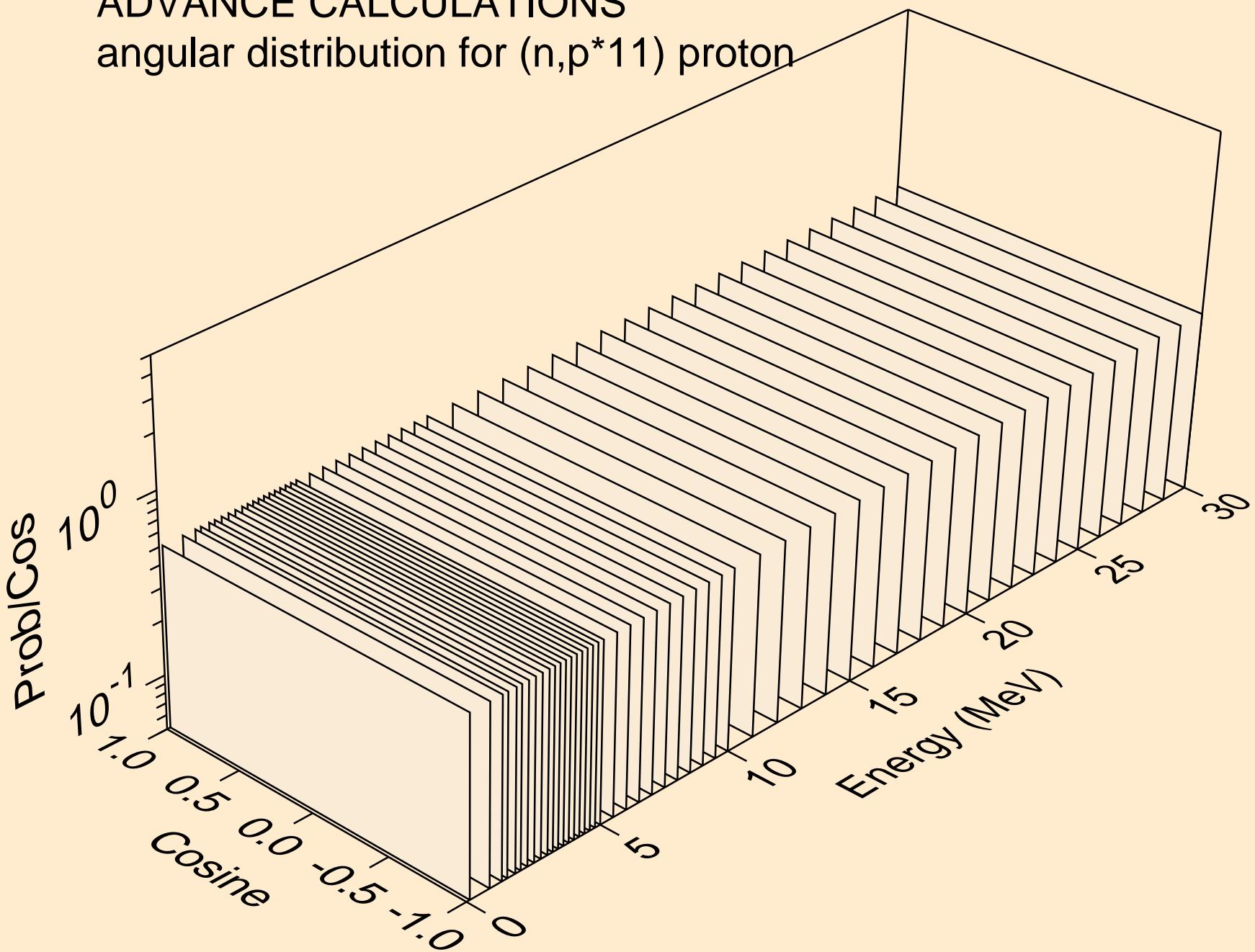
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*10$ ) proton



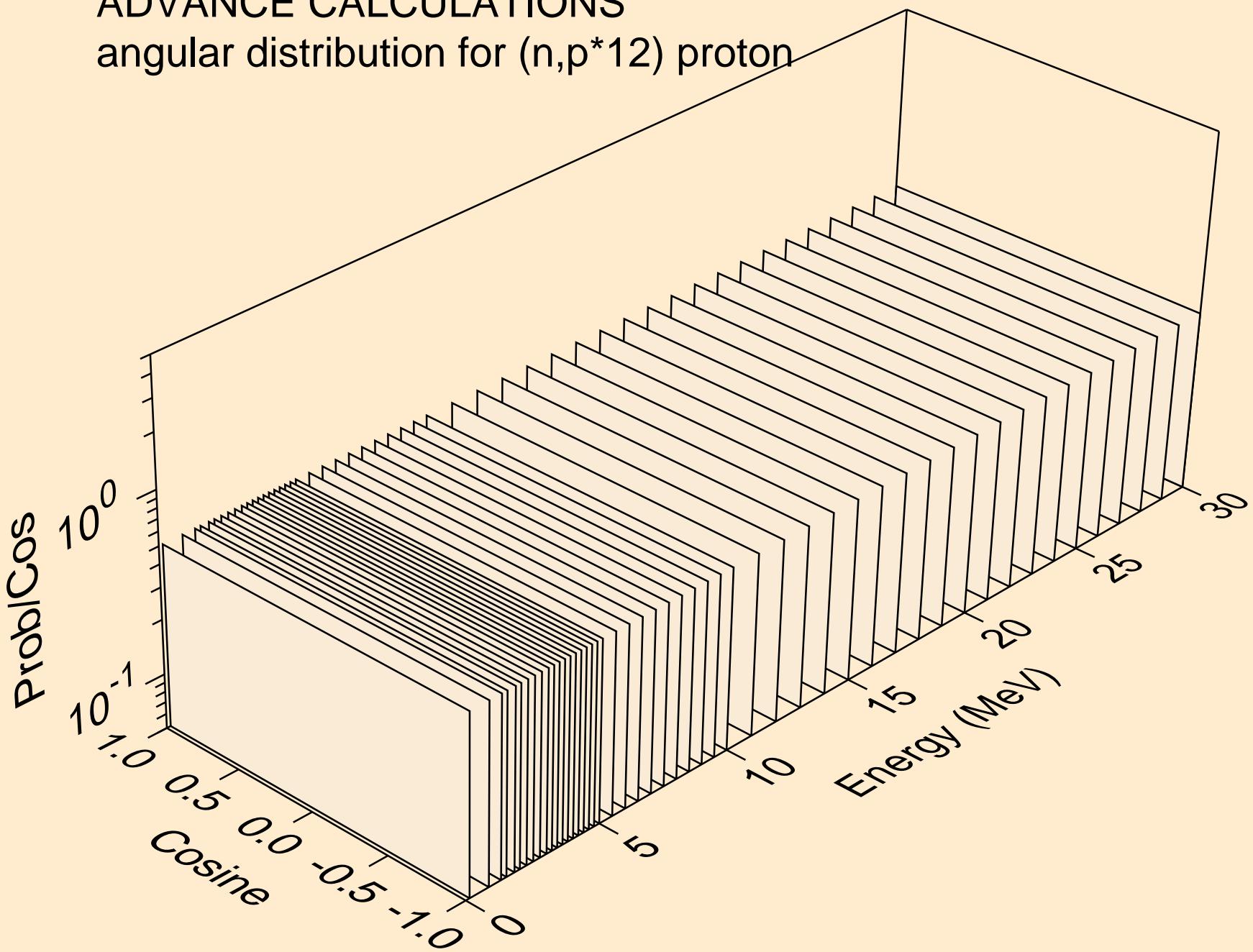
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*11$ ) proton



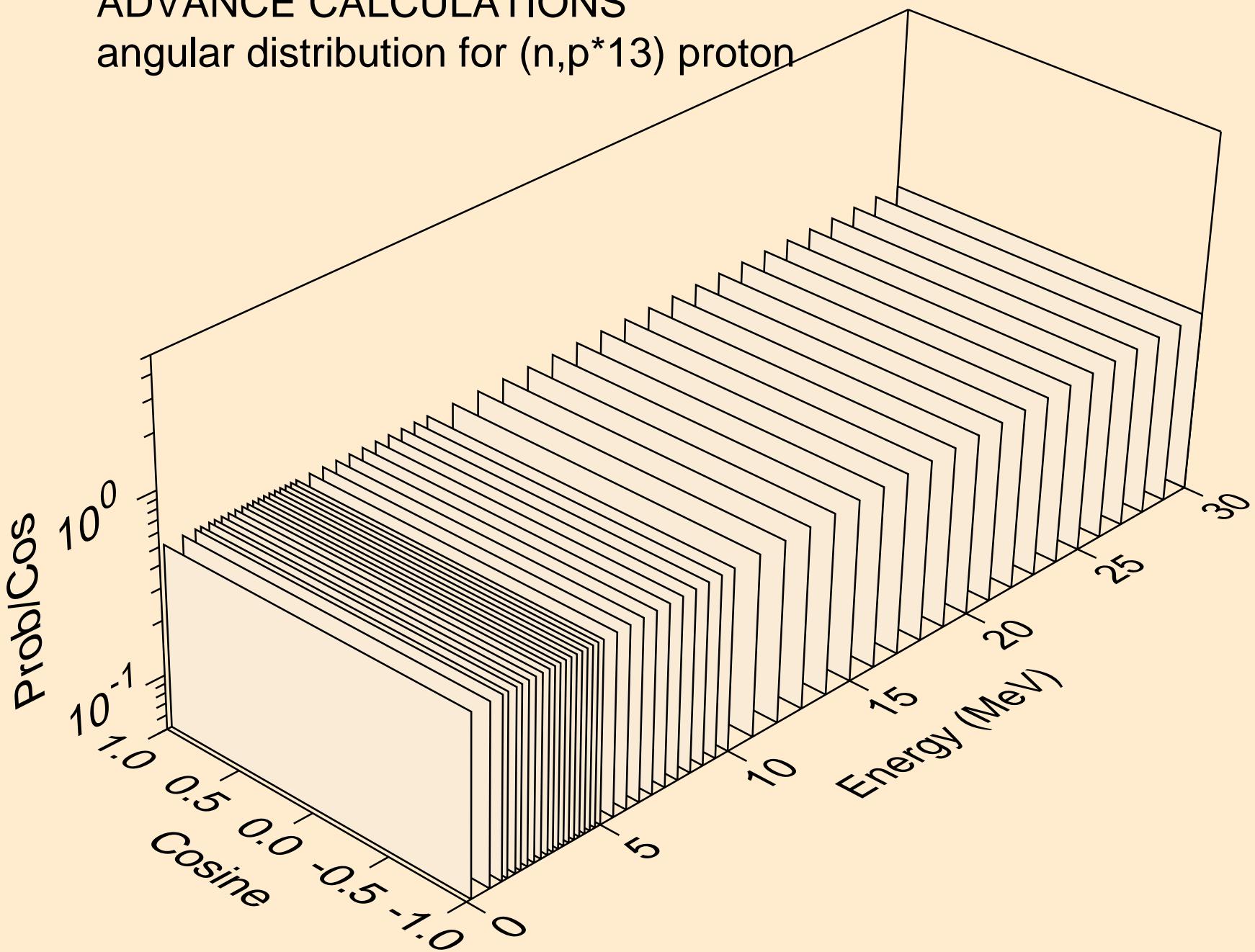
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*12$ ) proton



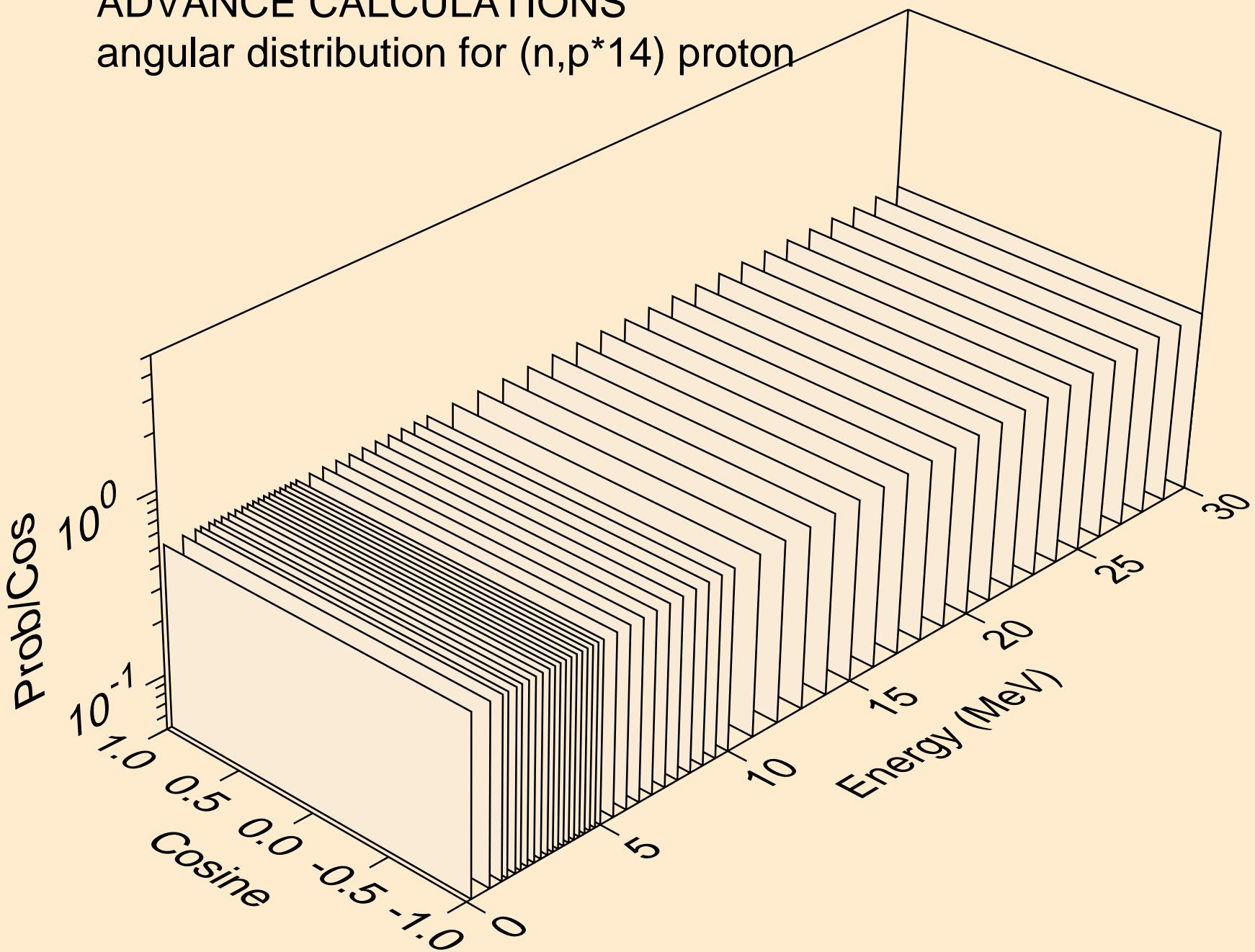
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*13$ ) proton



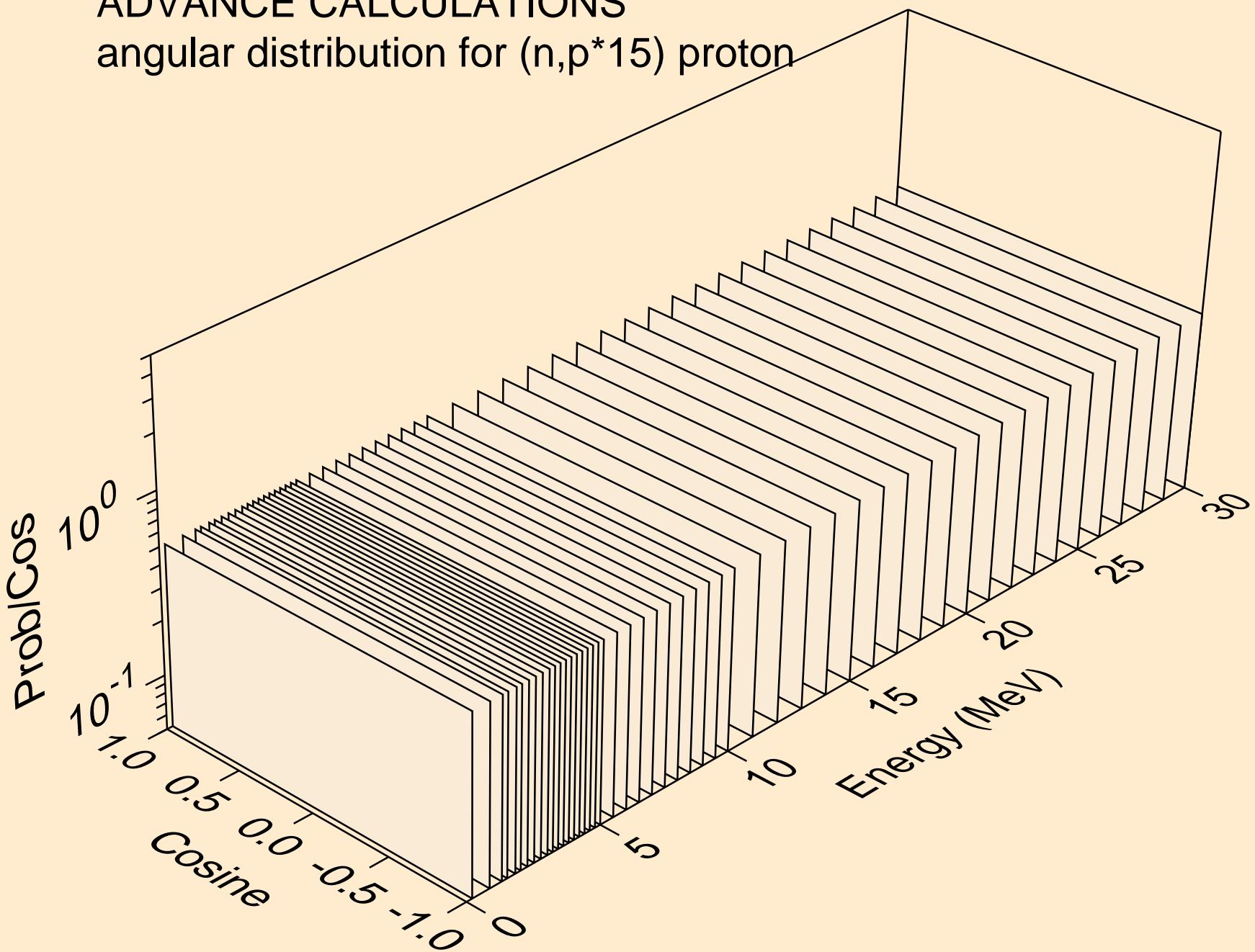
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*14$ ) proton



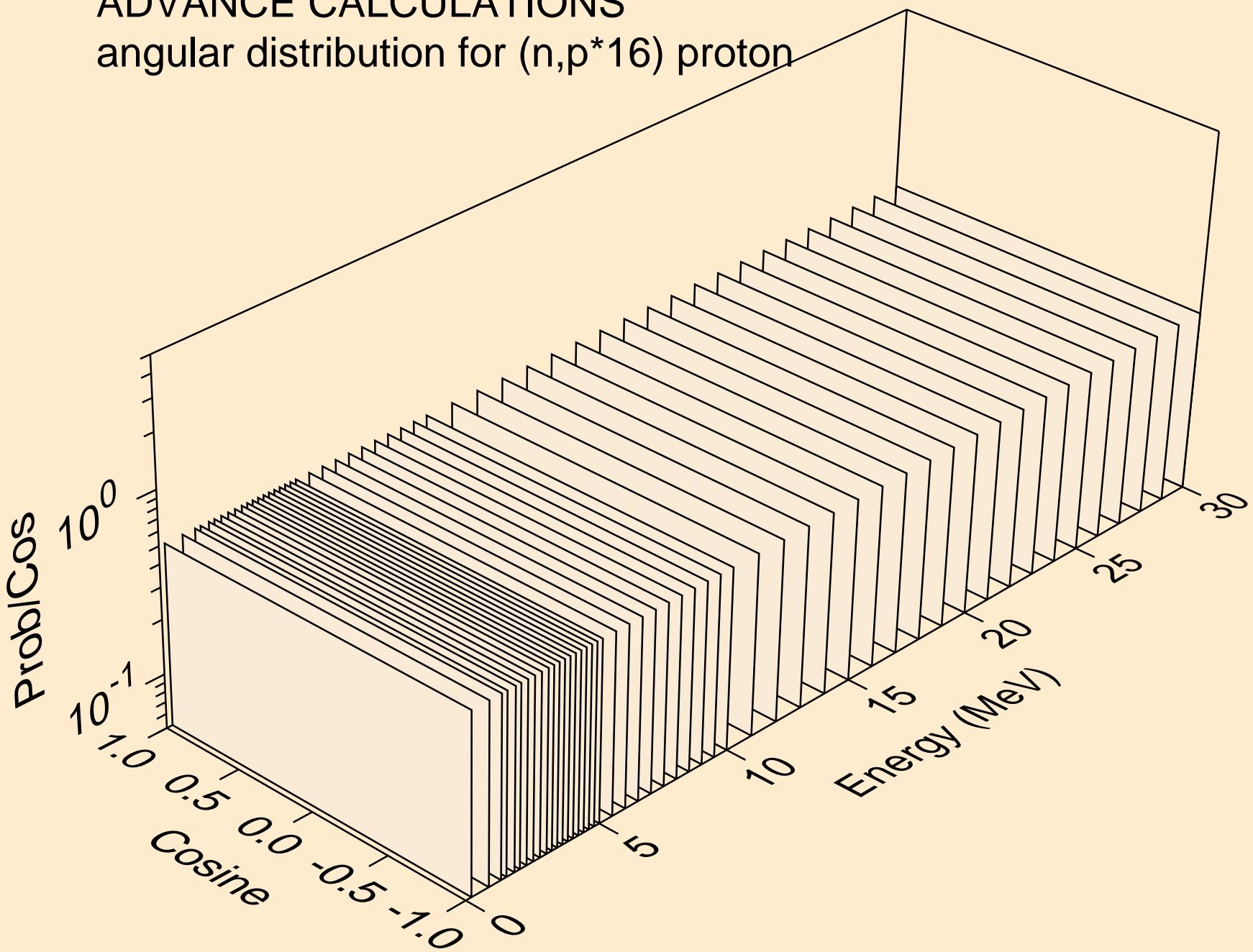
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*15$ ) proton



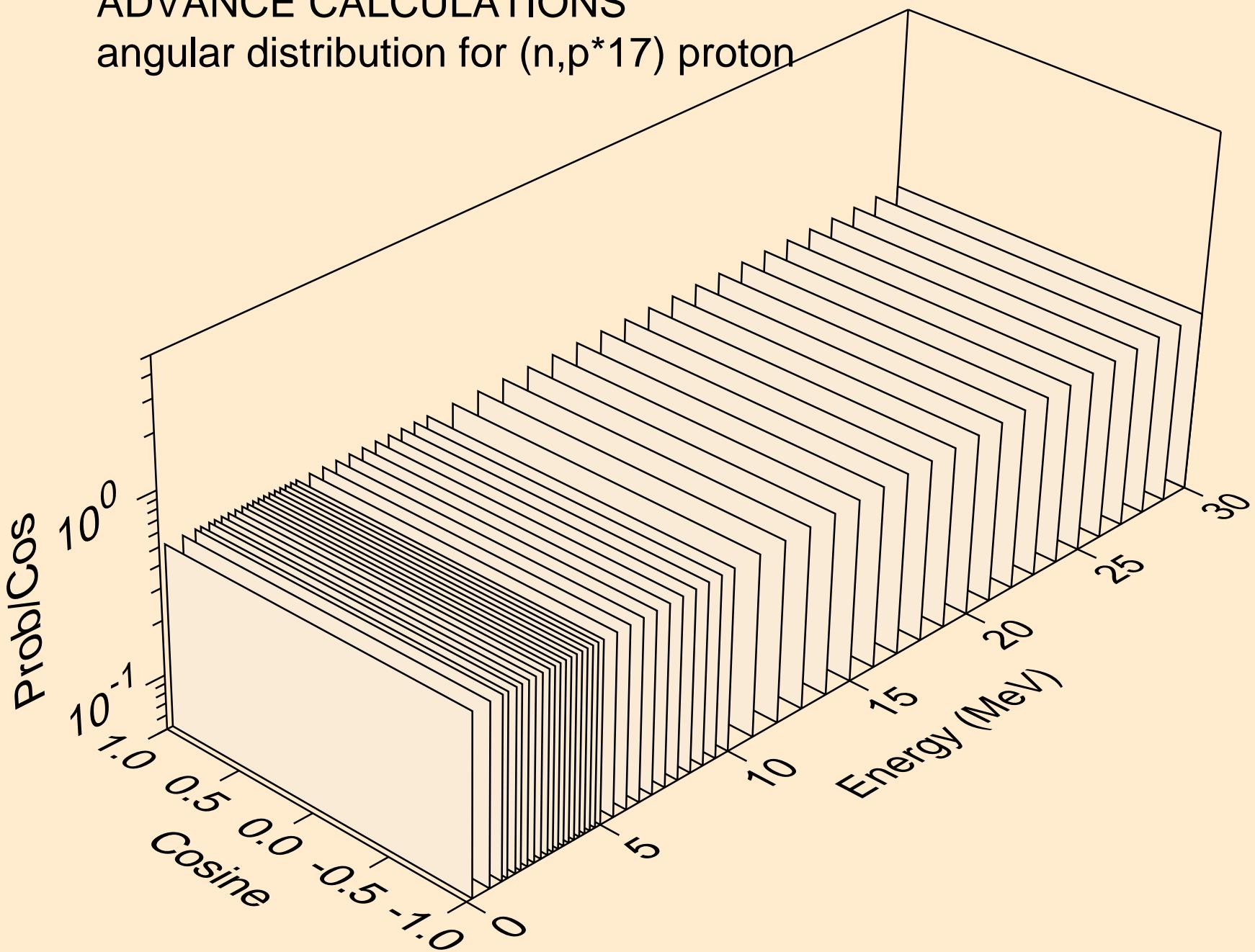
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*16$ ) proton



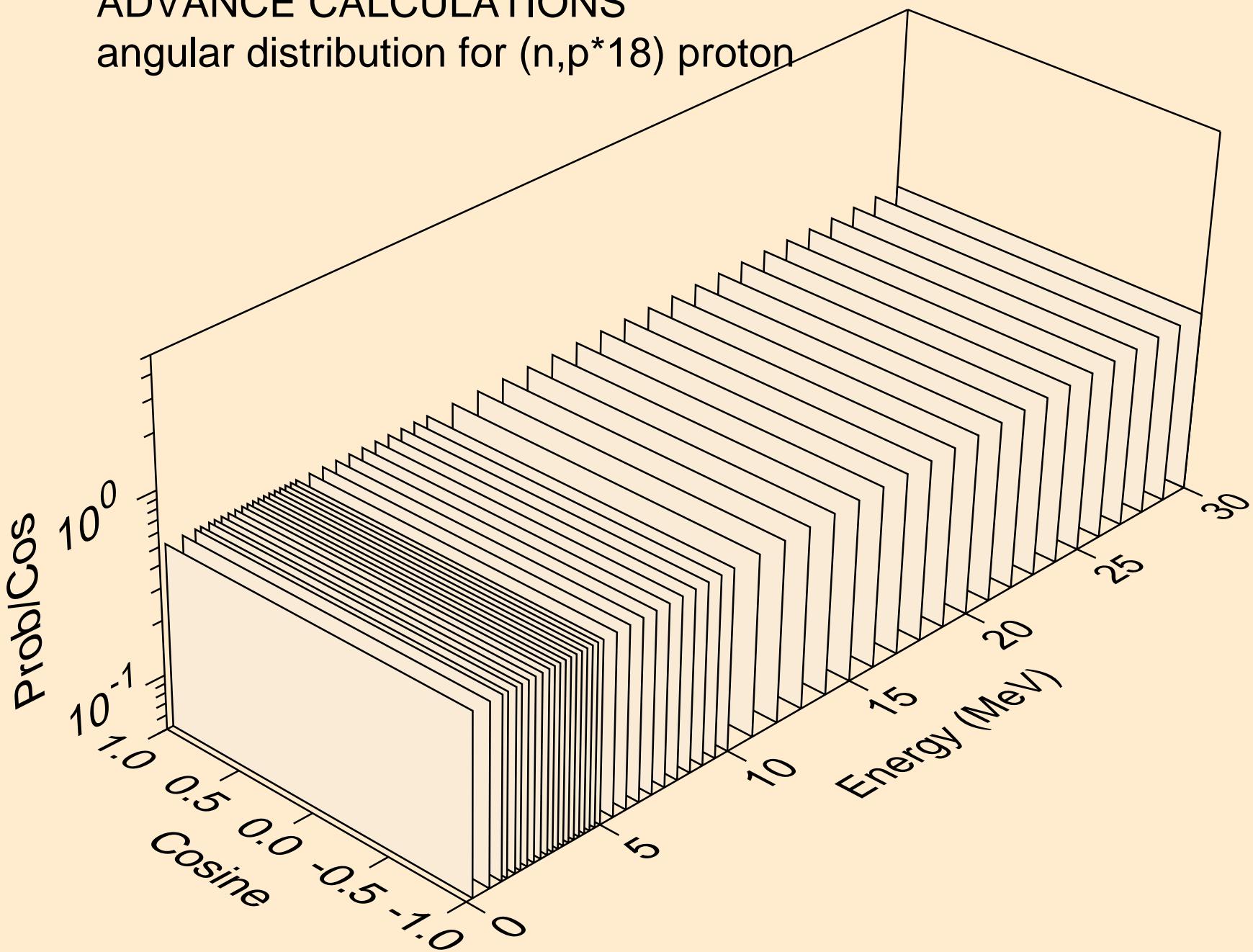
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*17$ ) proton



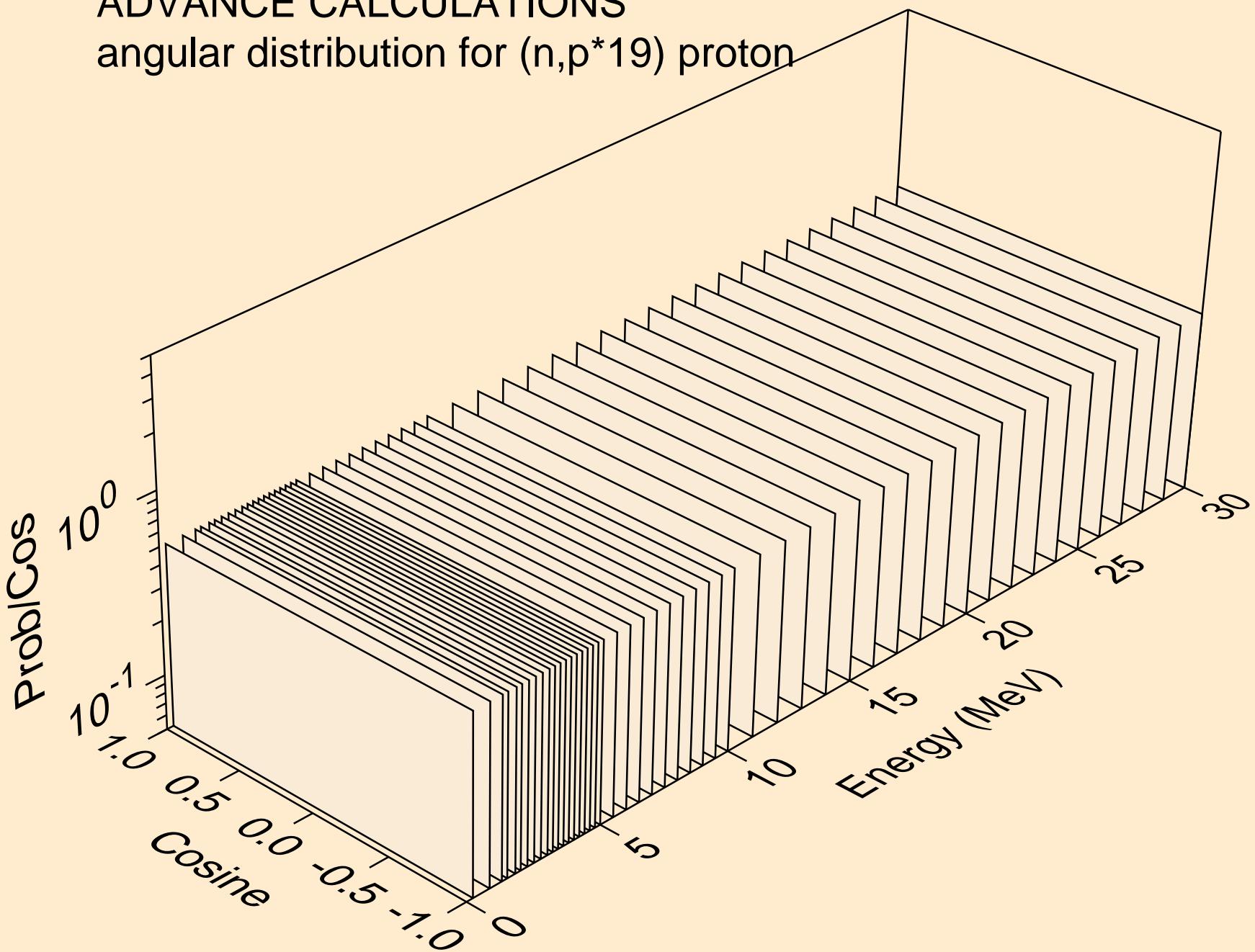
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*18$ ) proton



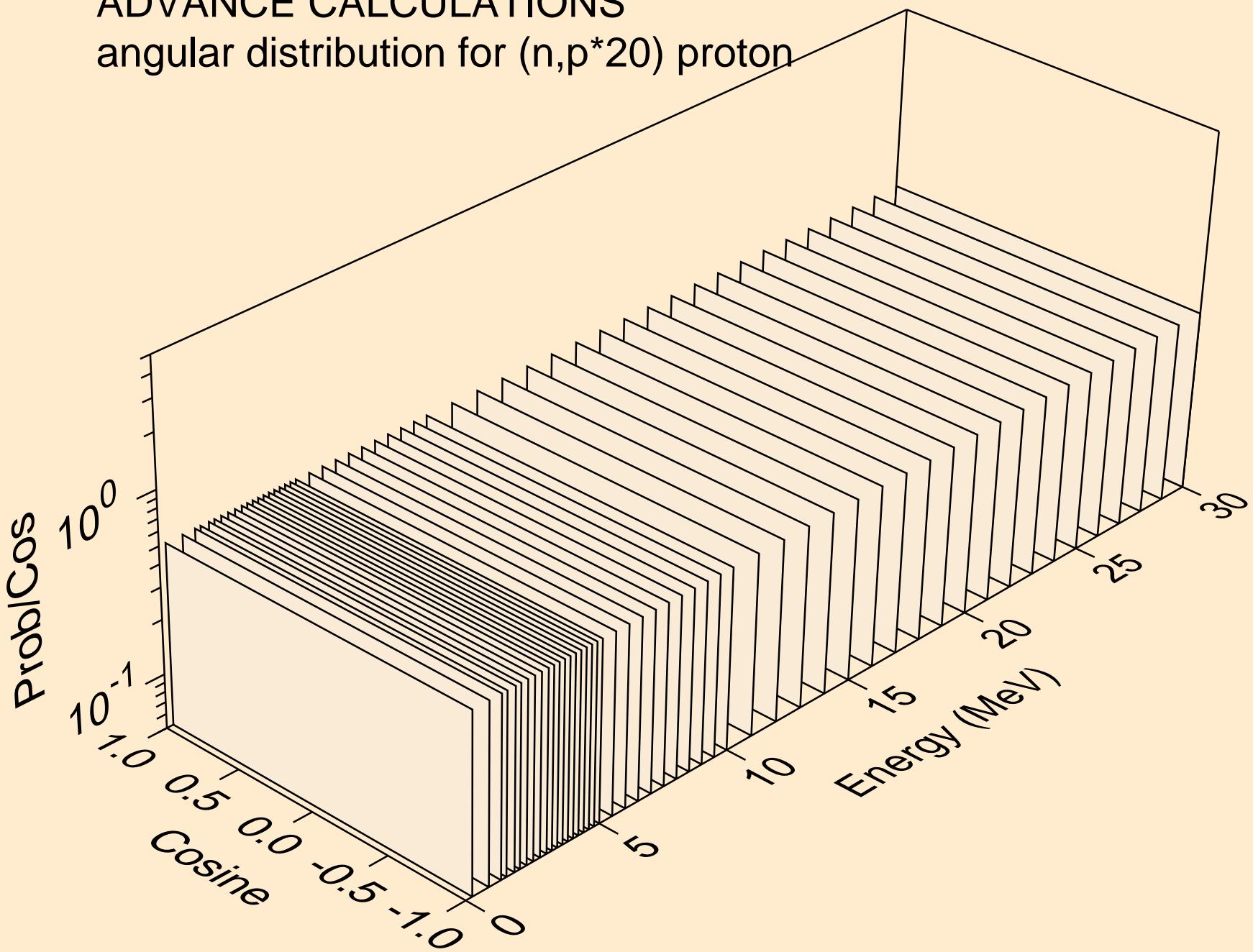
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*19$ ) proton



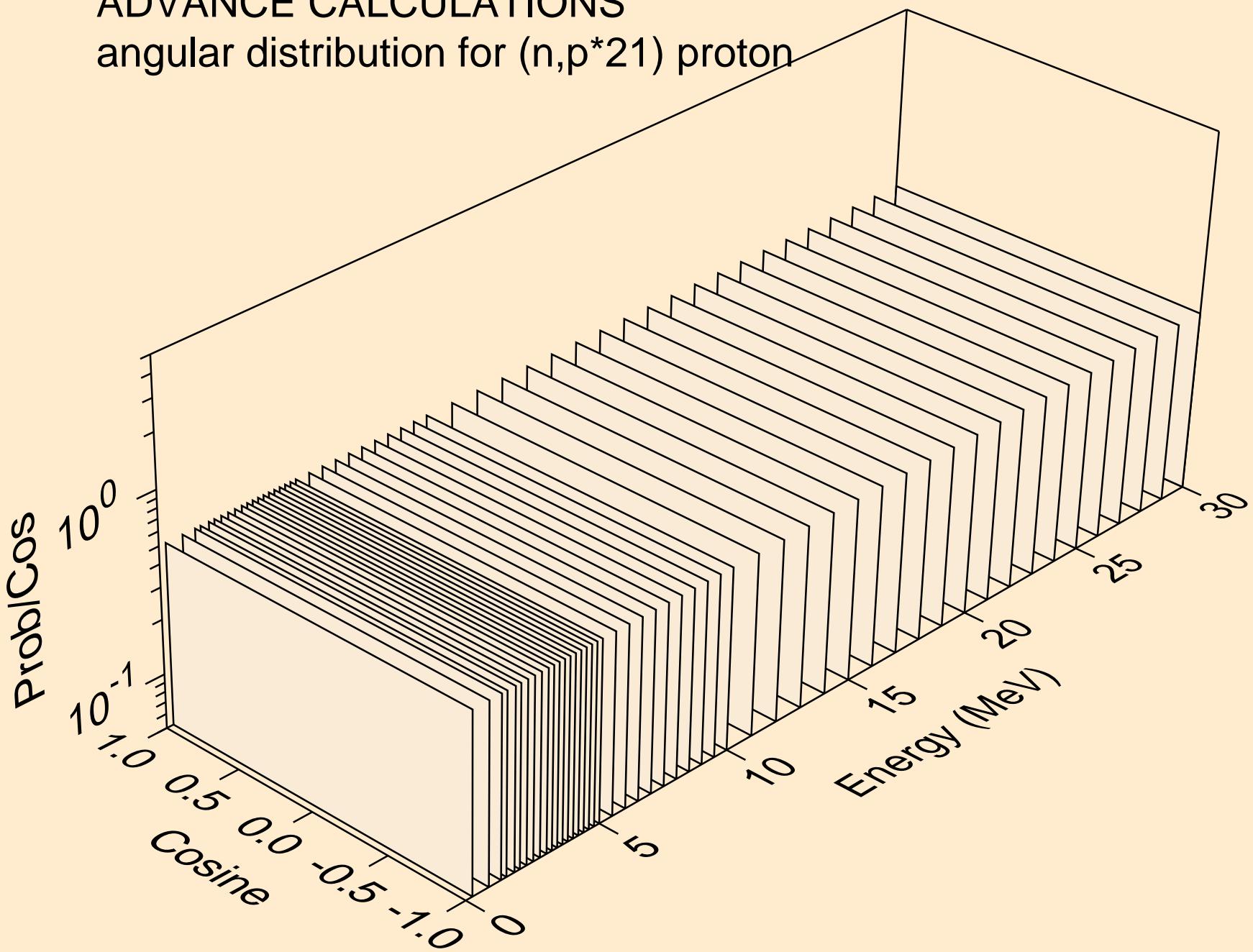
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*$ ) proton



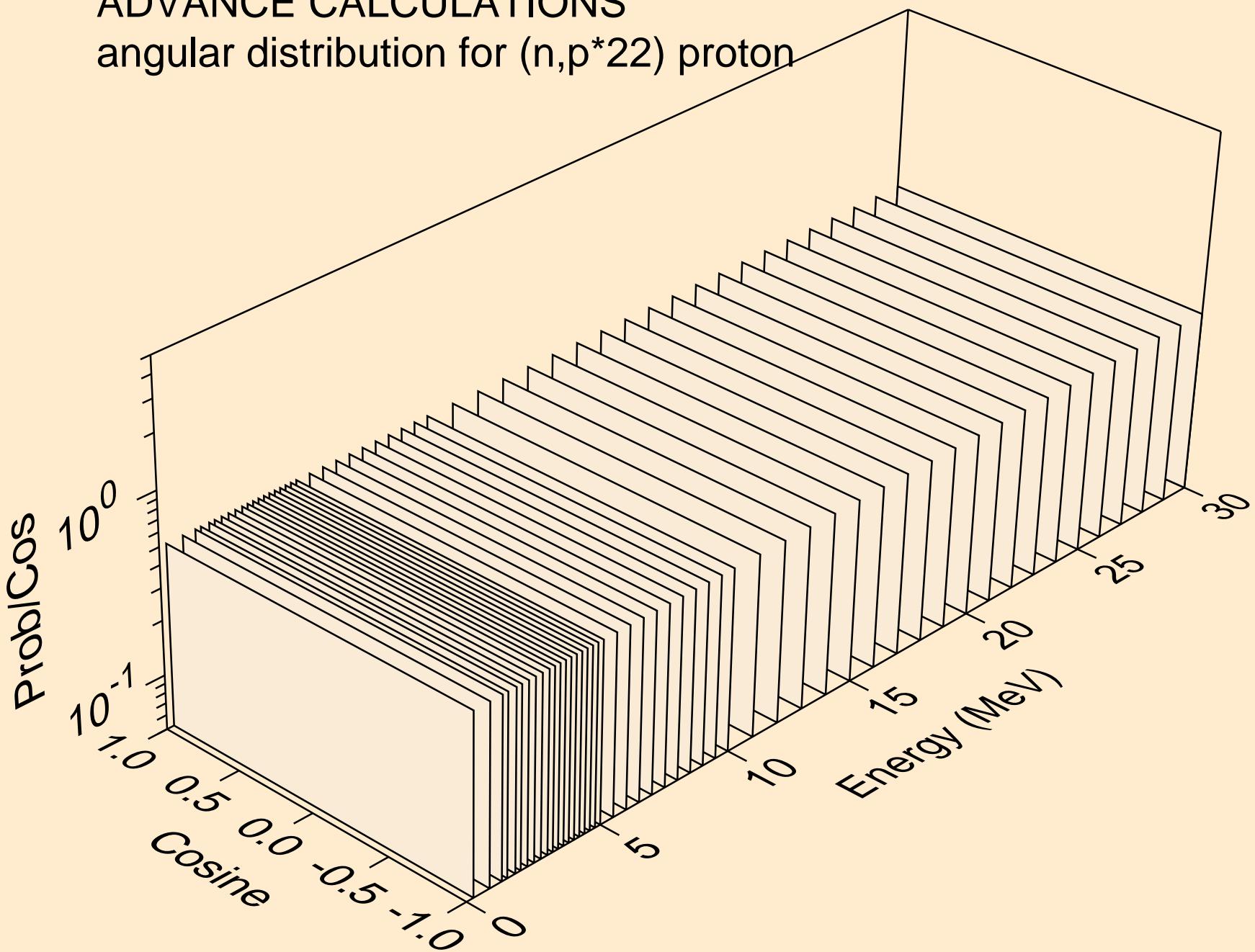
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*21$ ) proton



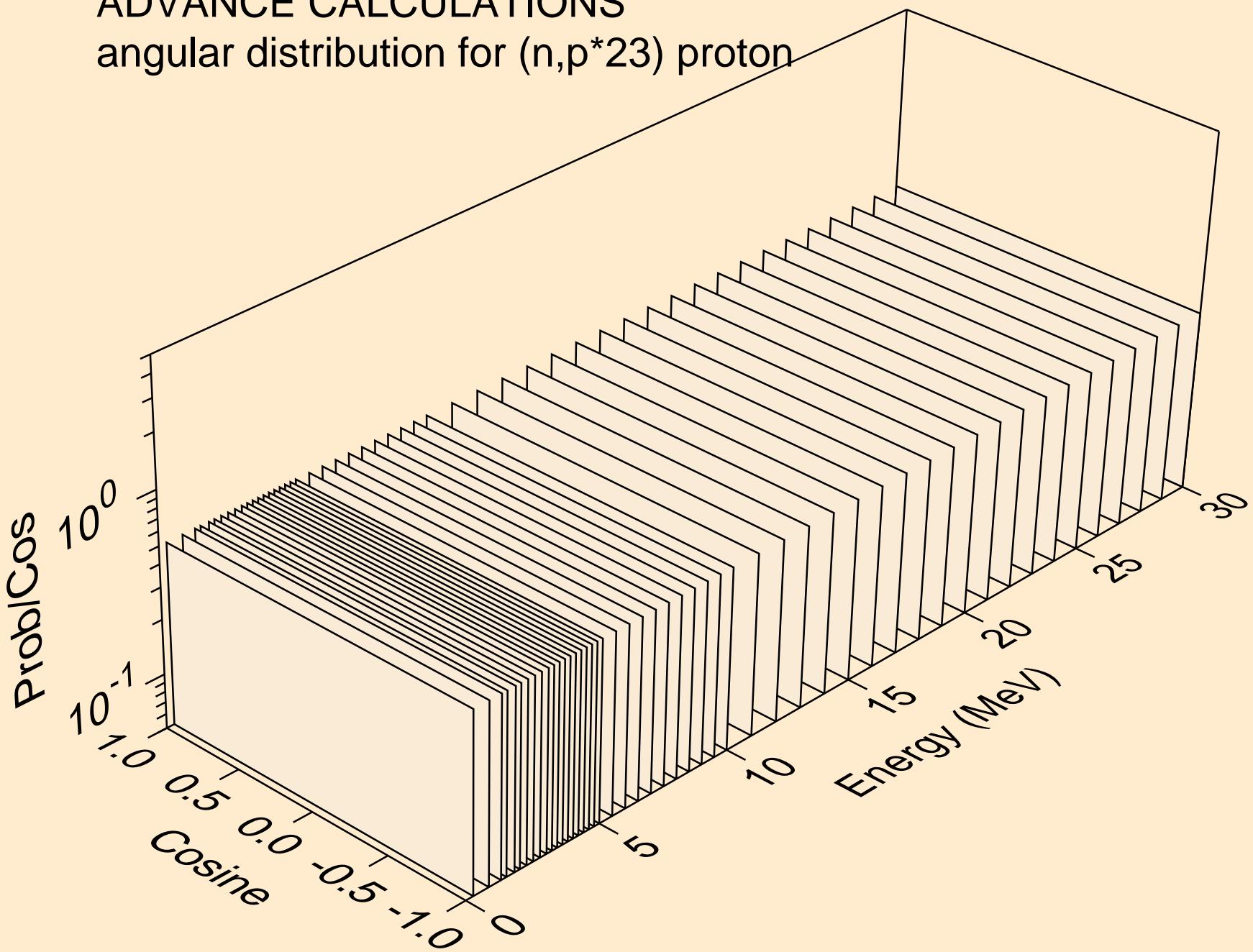
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*22$ ) proton



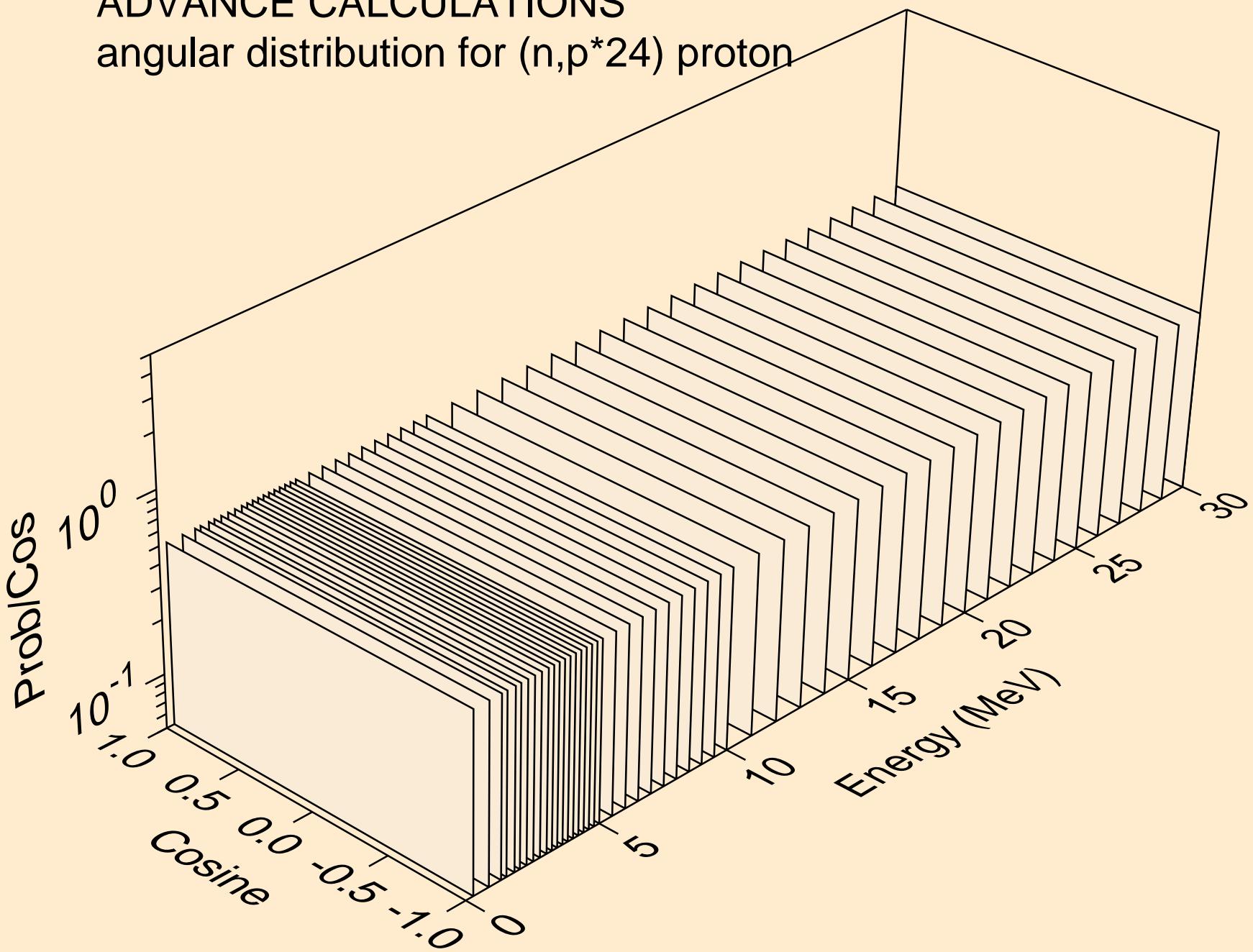
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*23$ ) proton



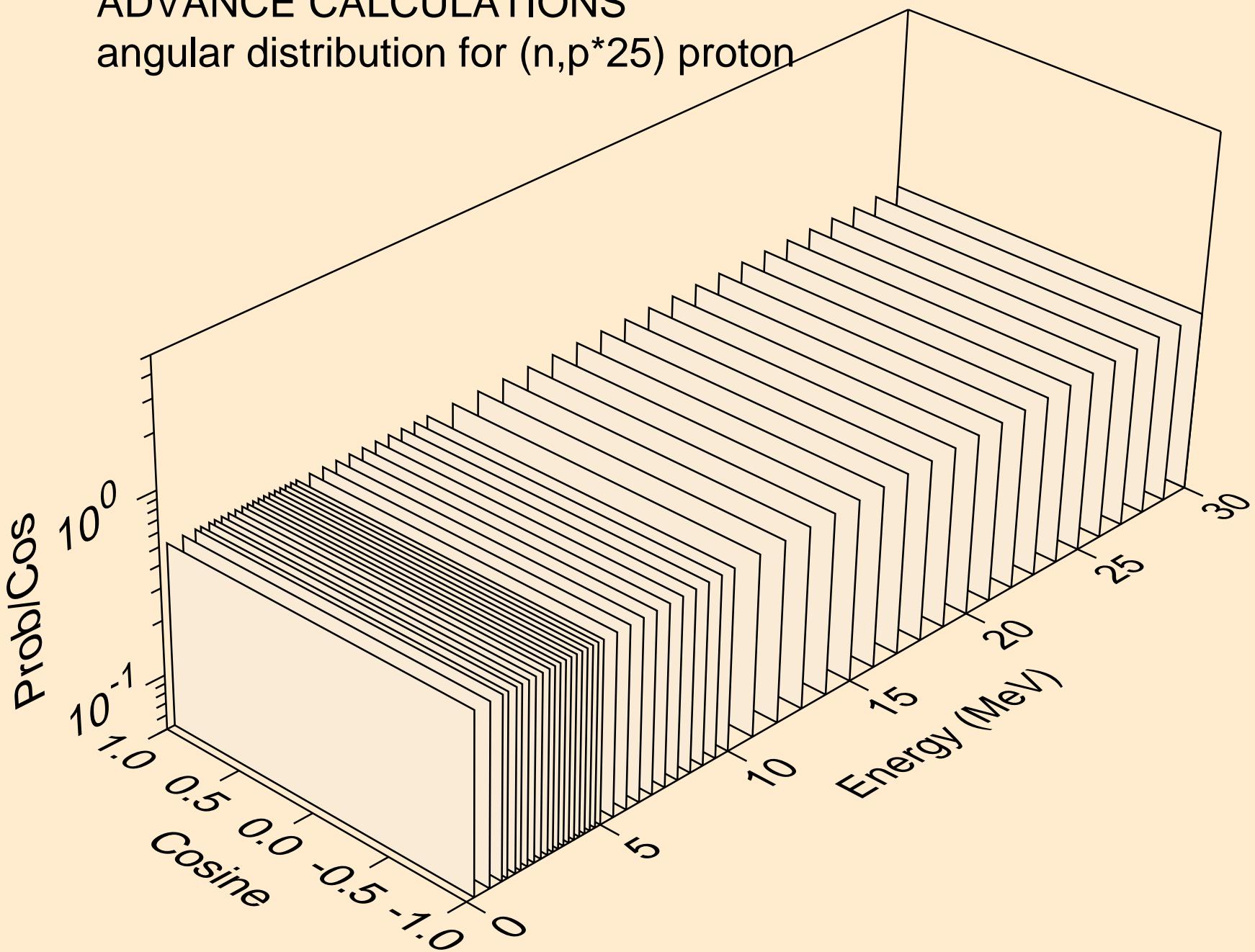
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*24$ ) proton



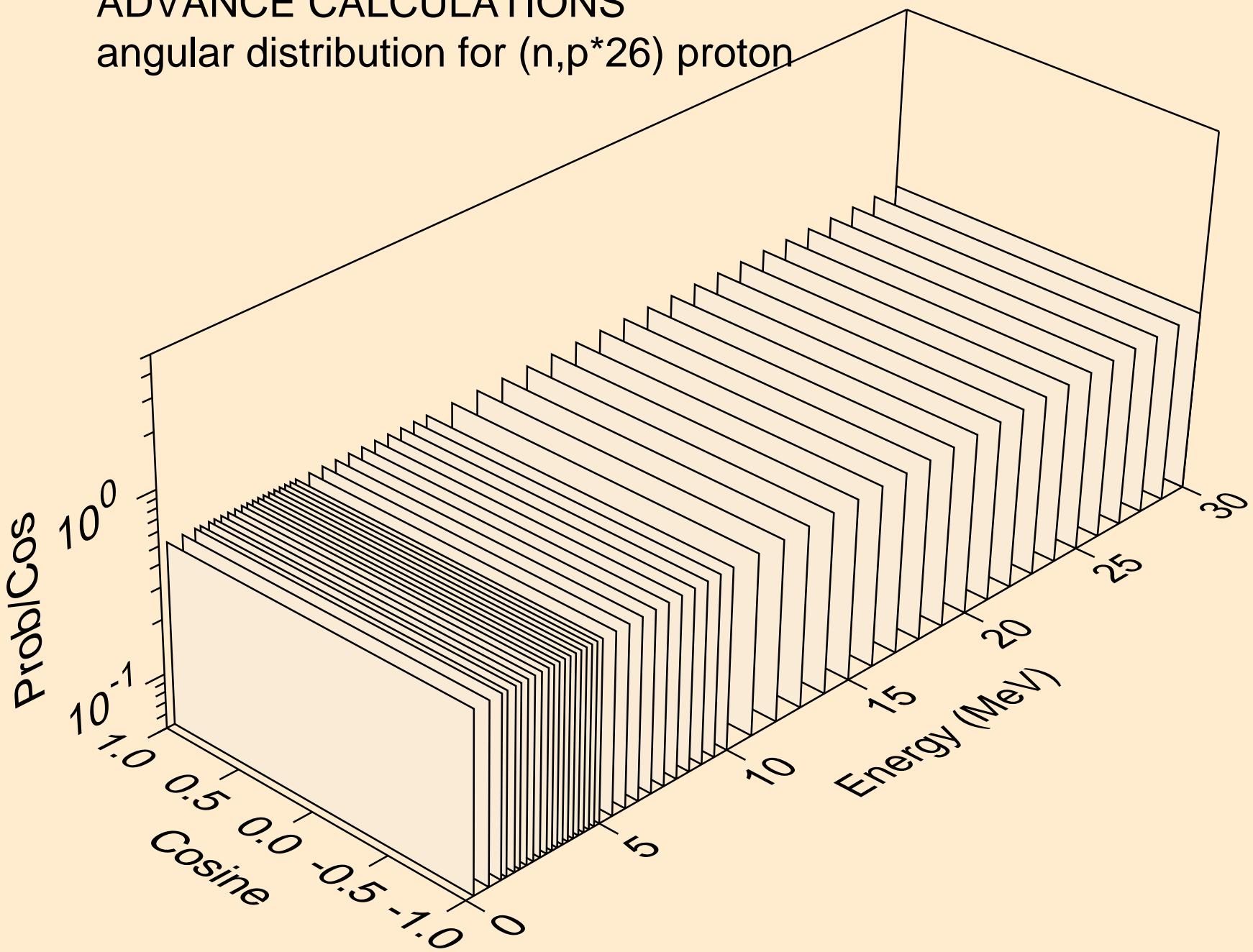
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*25$ ) proton



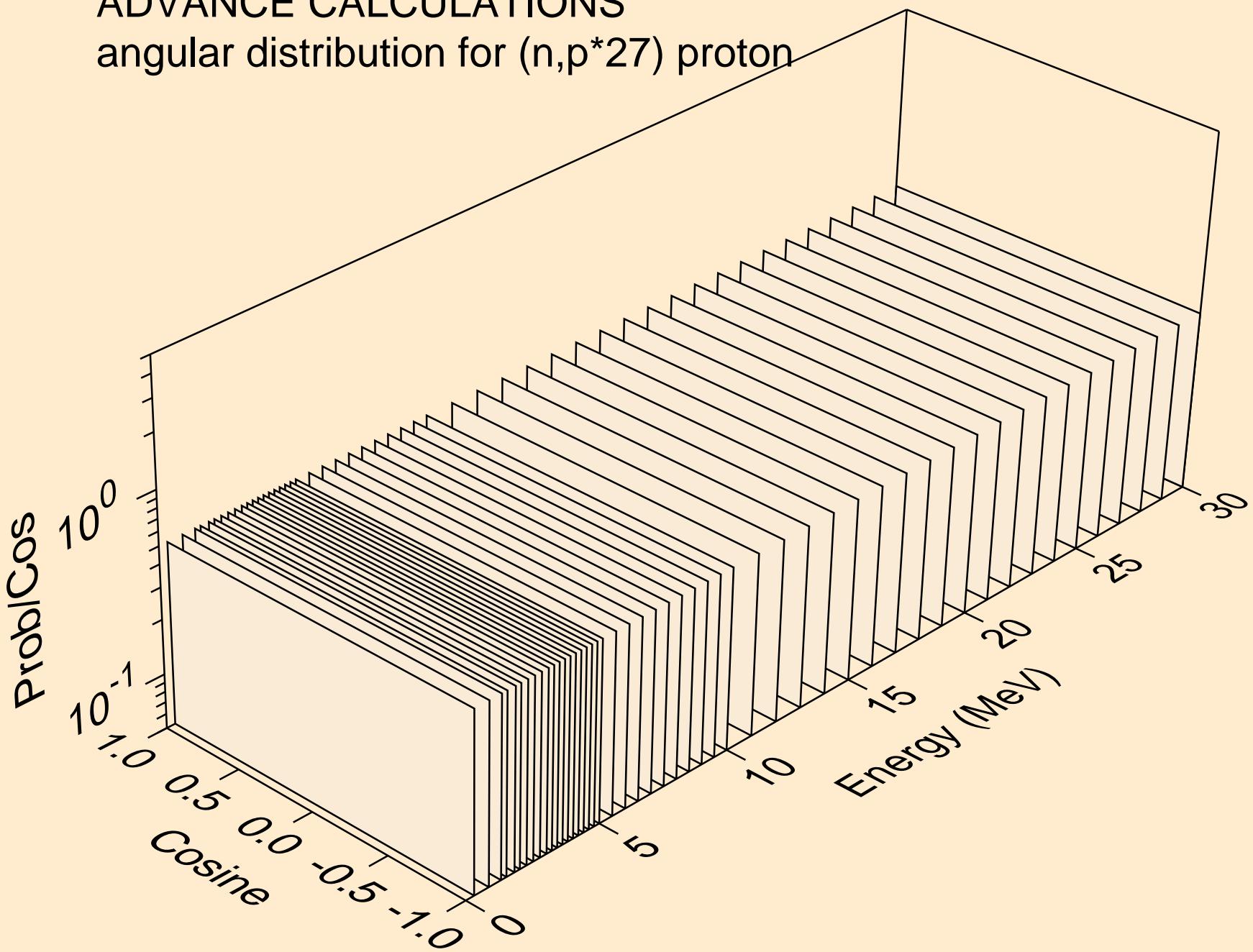
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*$ ) proton



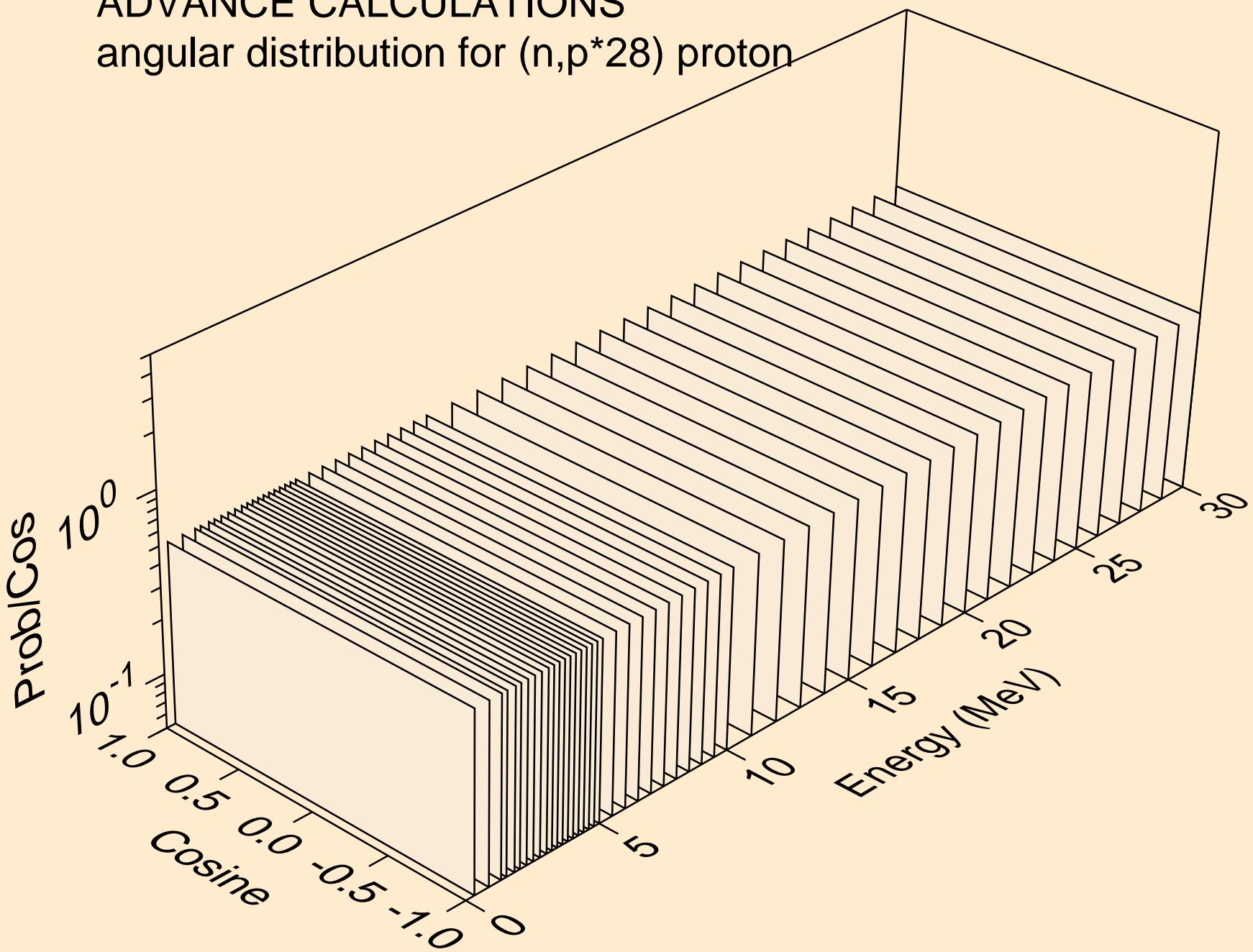
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*27$ ) proton



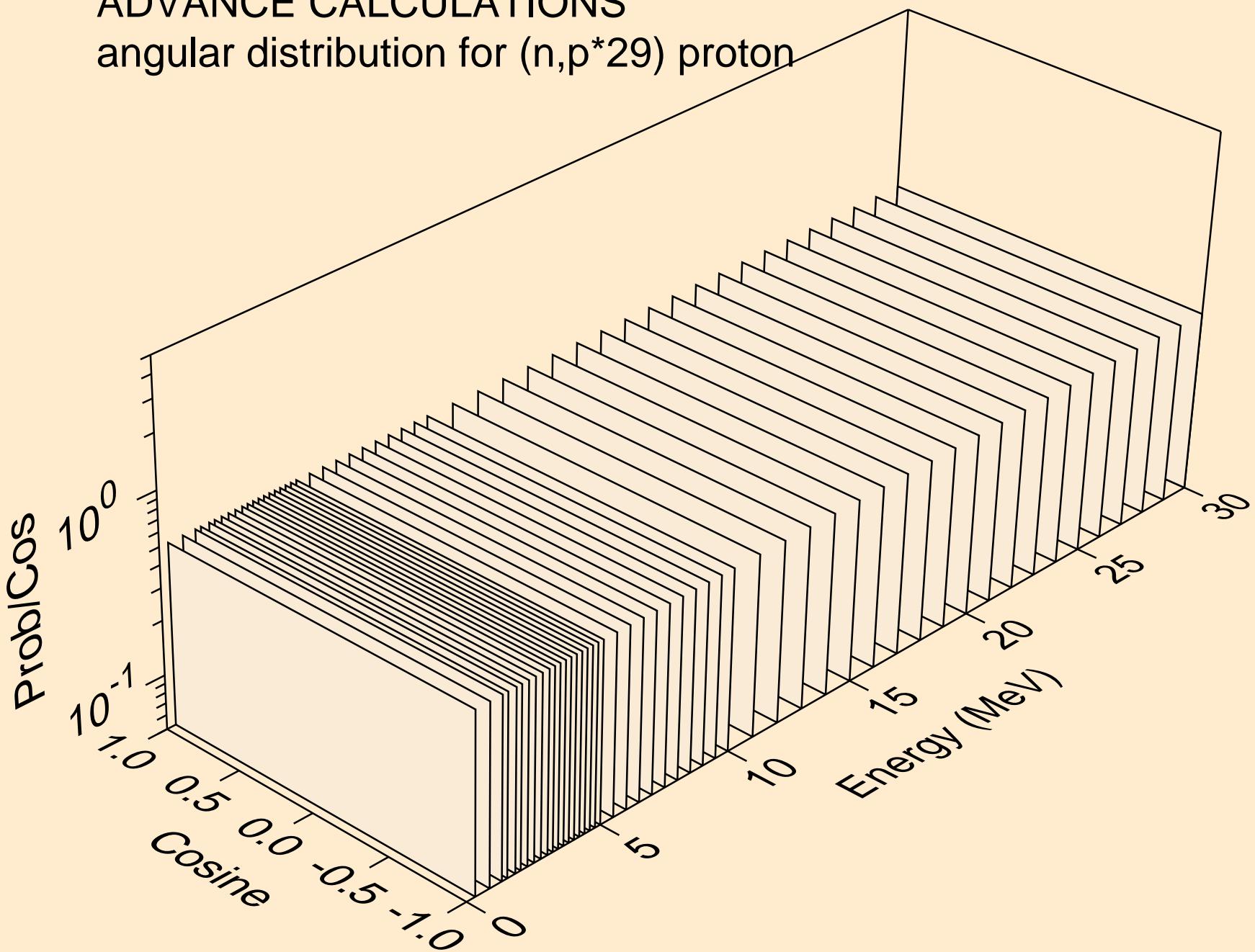
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*28$ ) proton



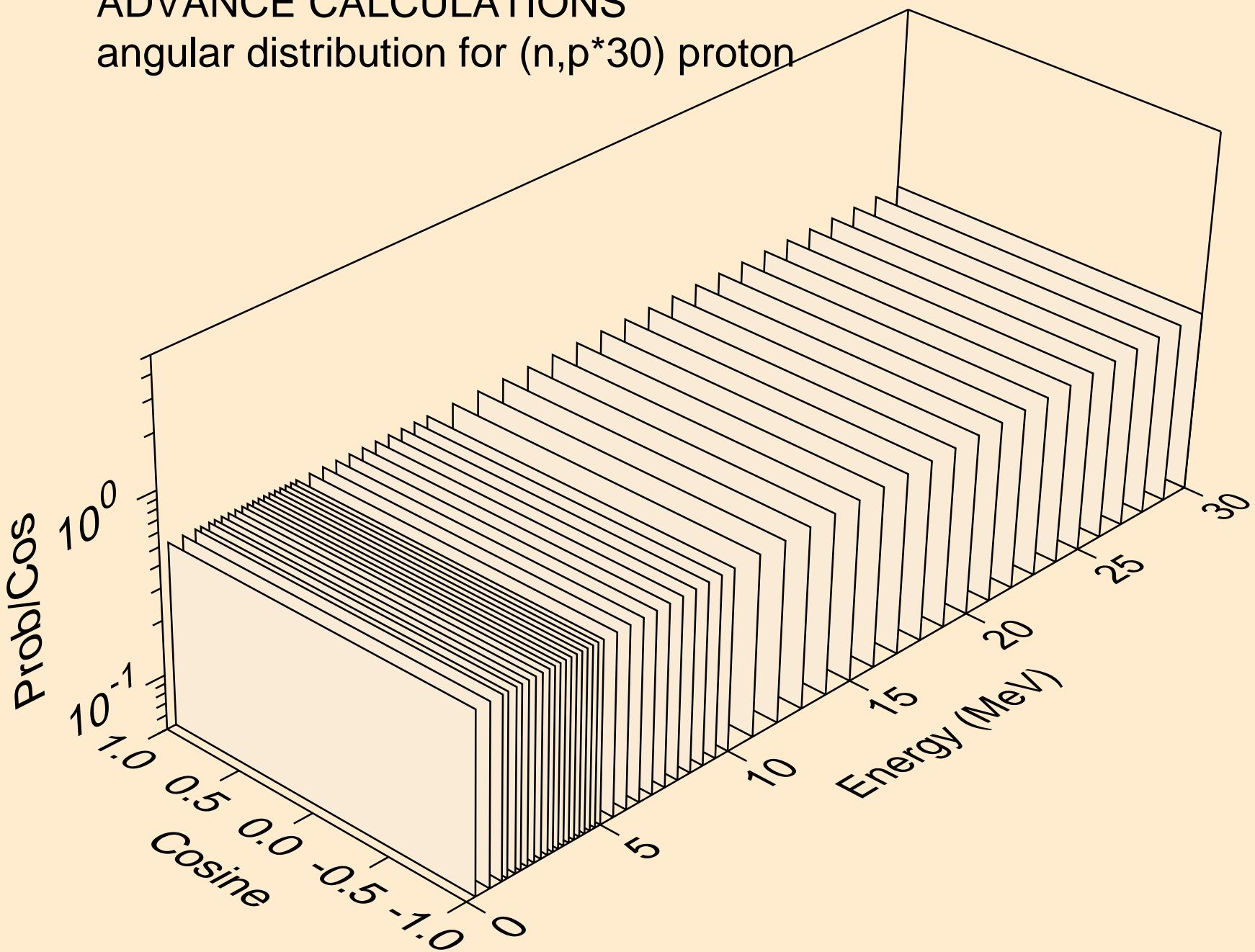
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*29$ ) proton



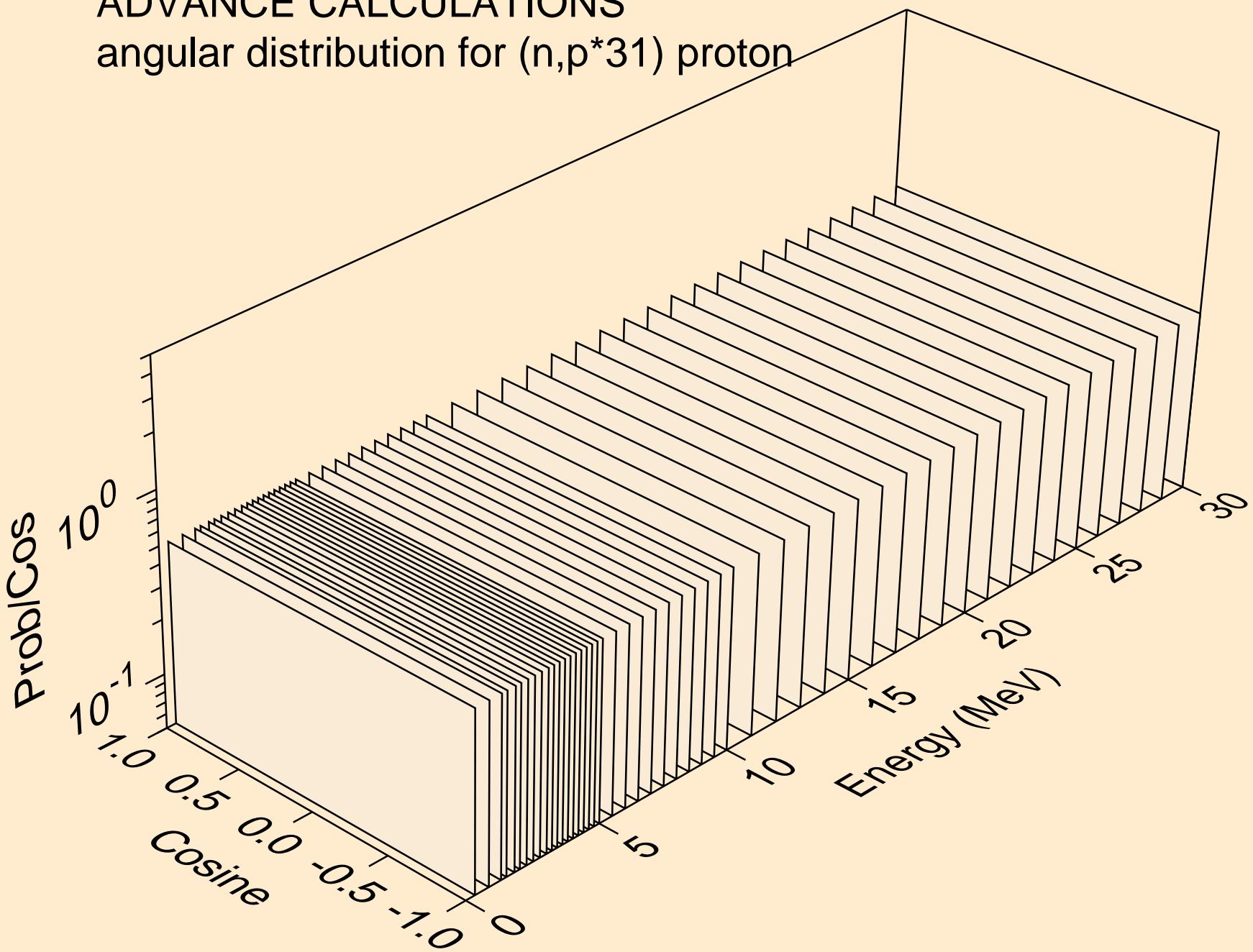
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*30$ ) proton



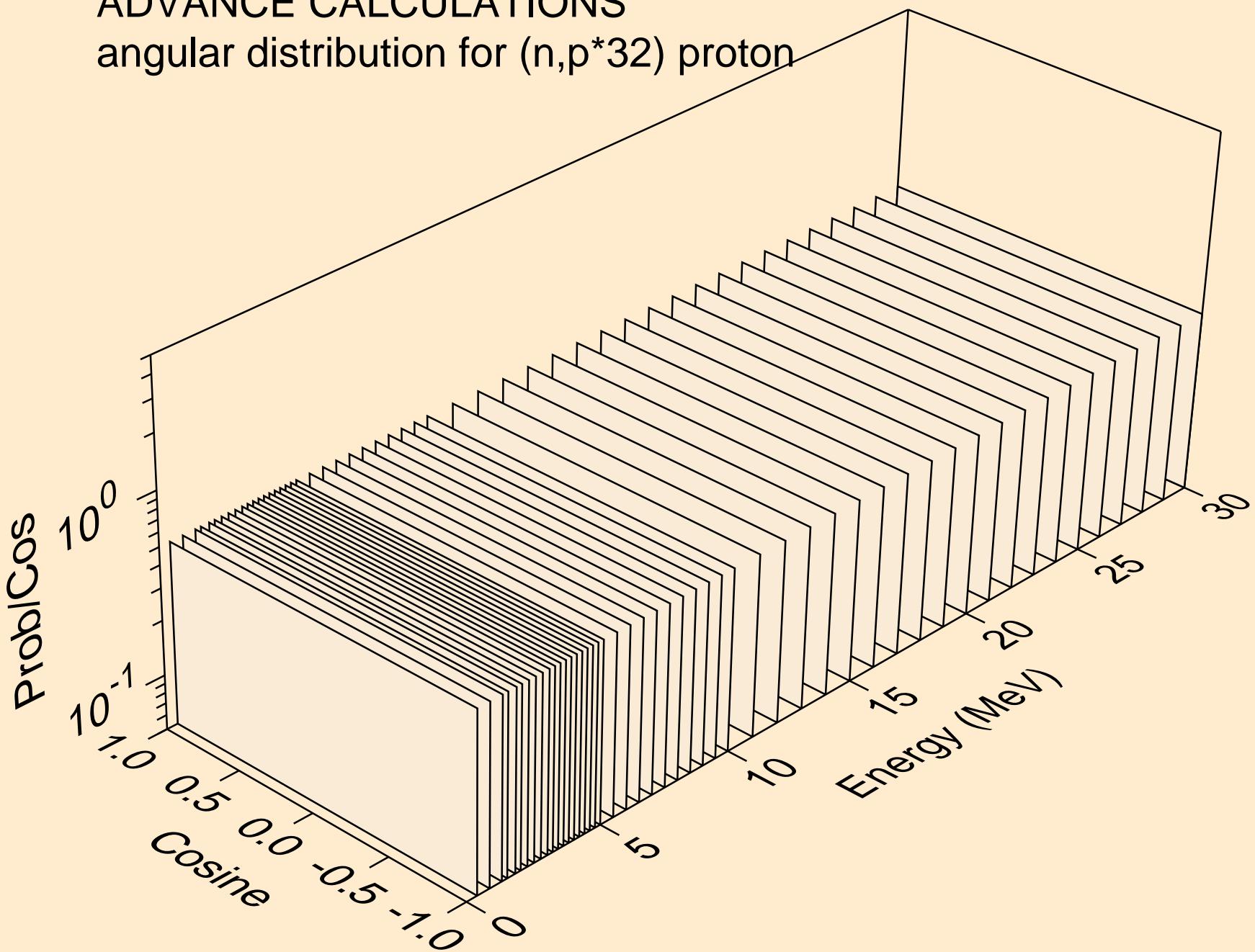
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*31$ ) proton



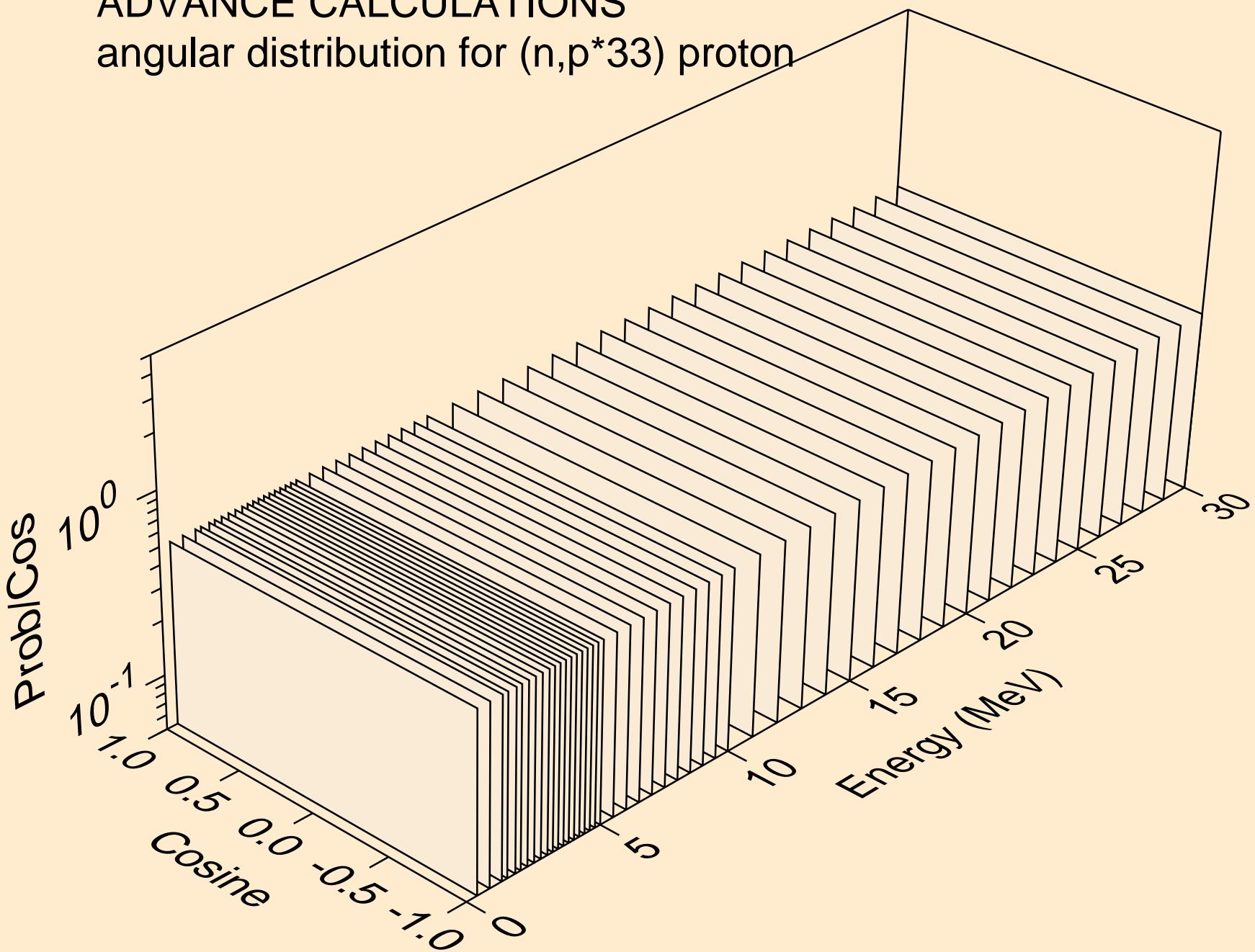
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*32$ ) proton



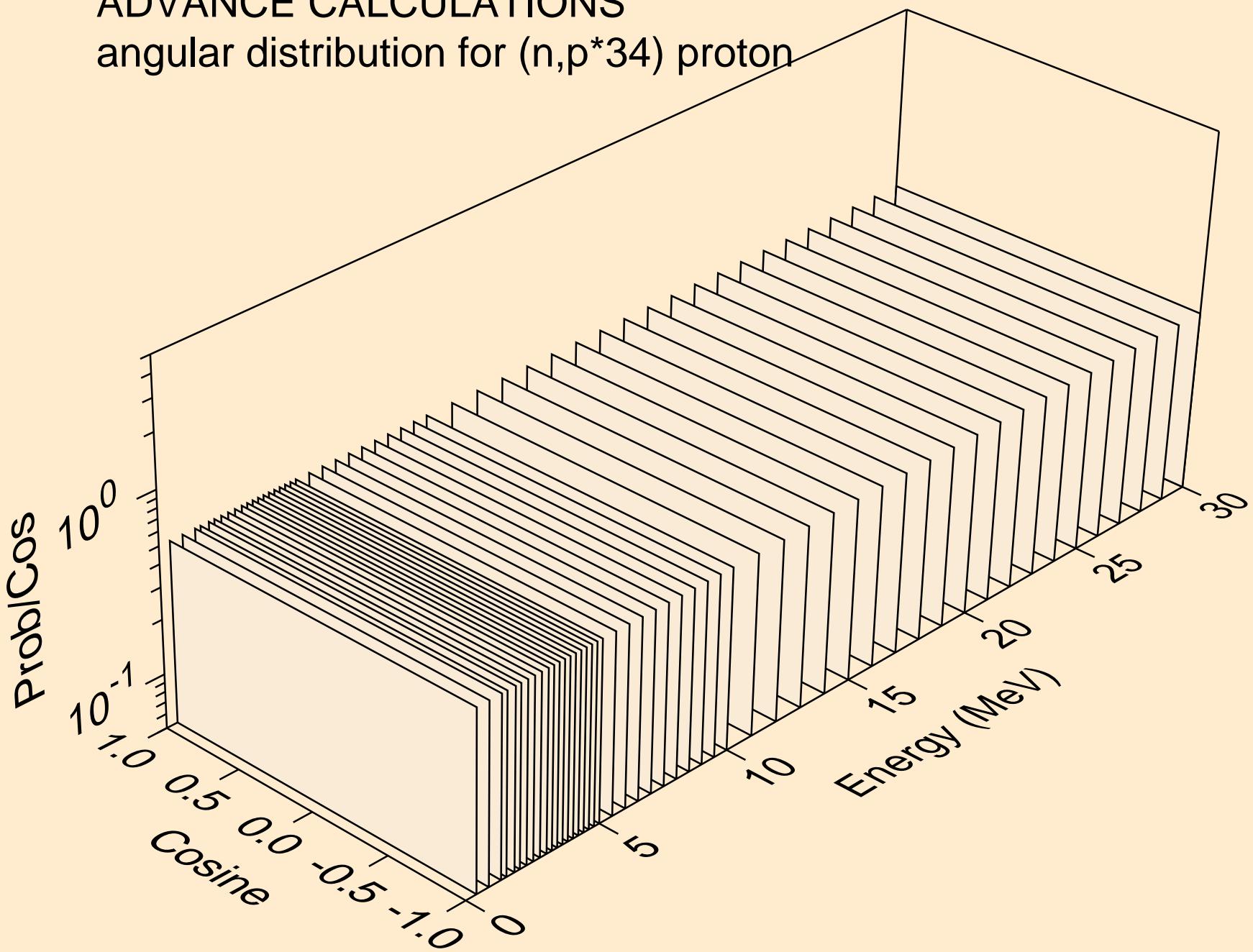
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*33$ ) proton



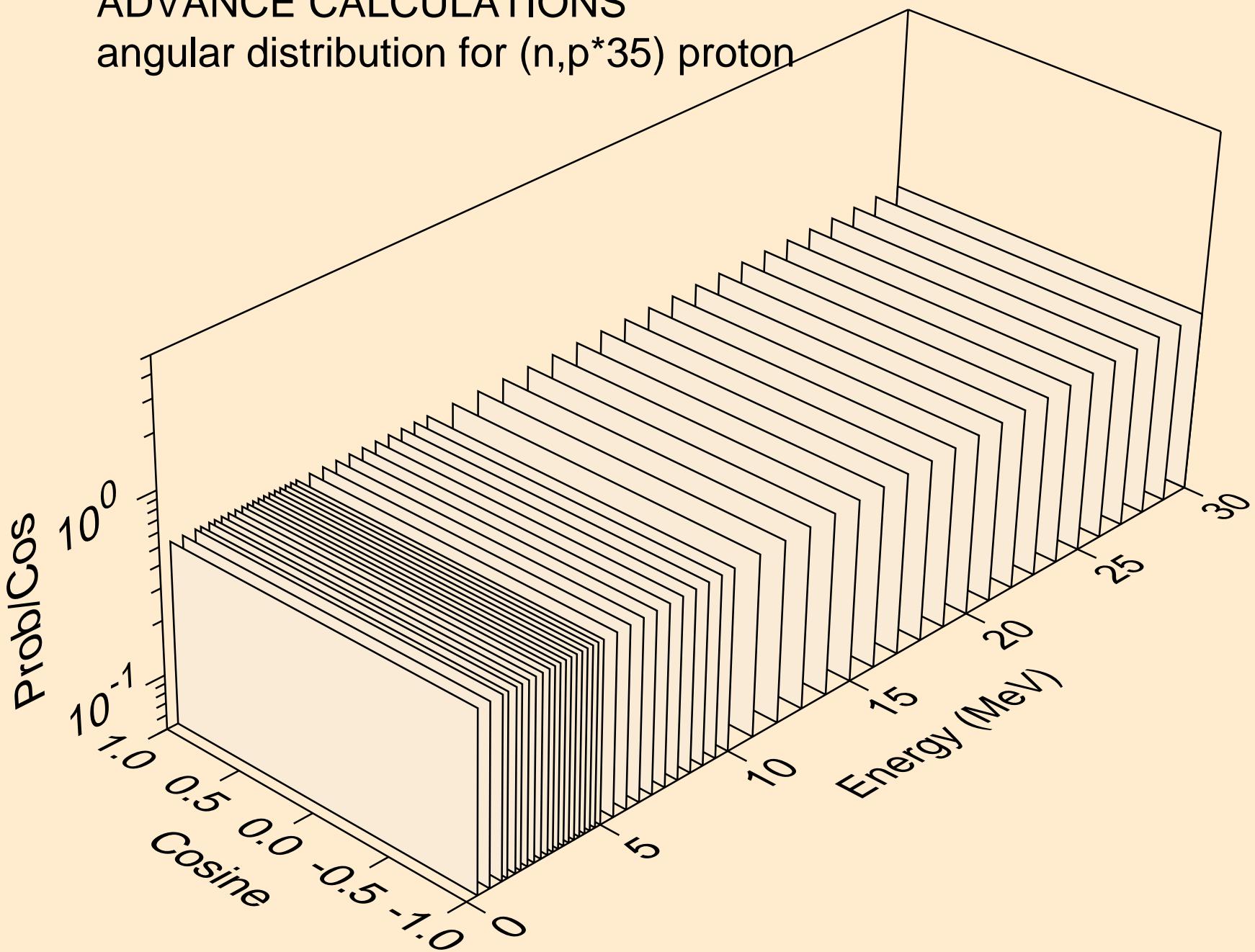
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*34$ ) proton



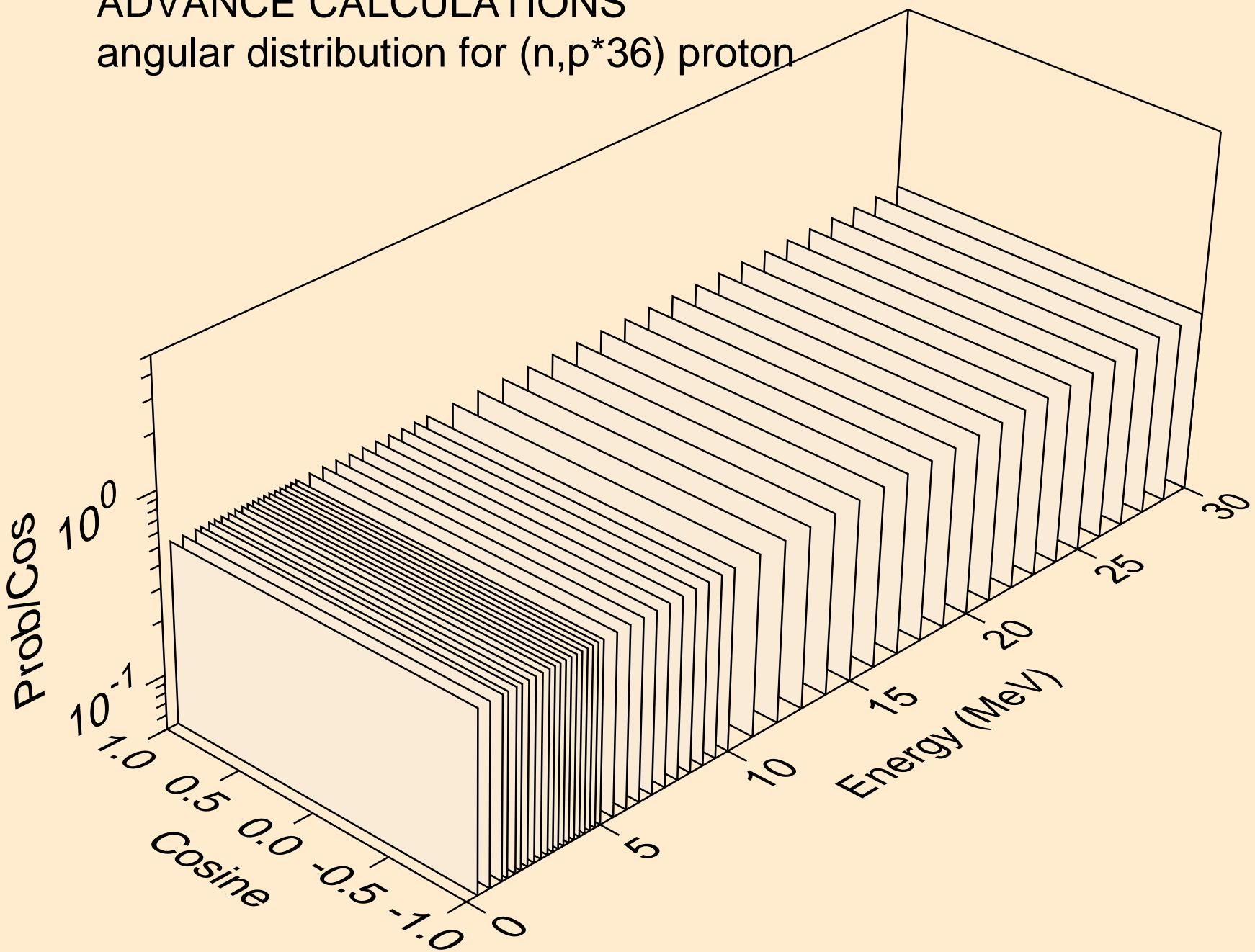
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*35$ ) proton



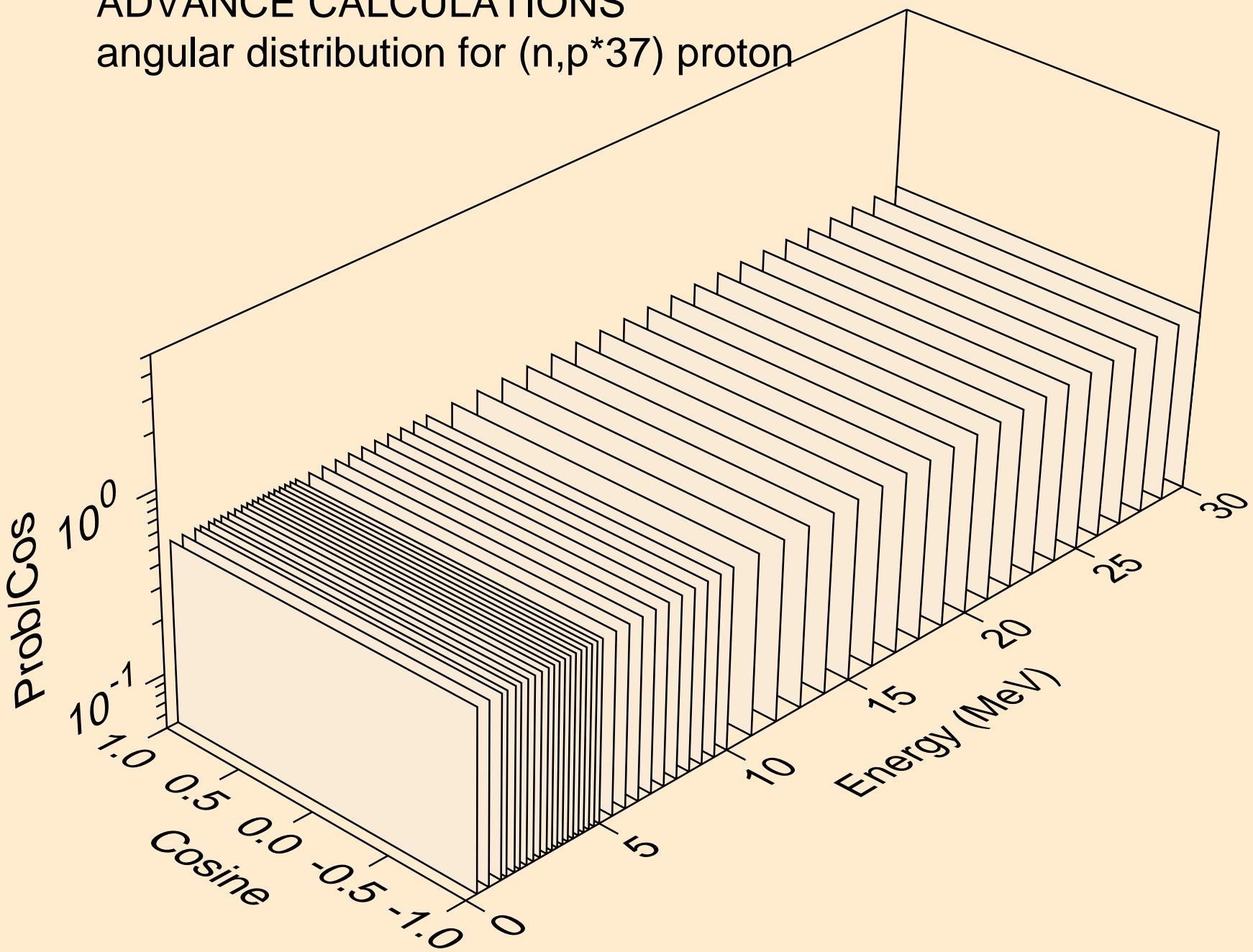
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*36$ ) proton



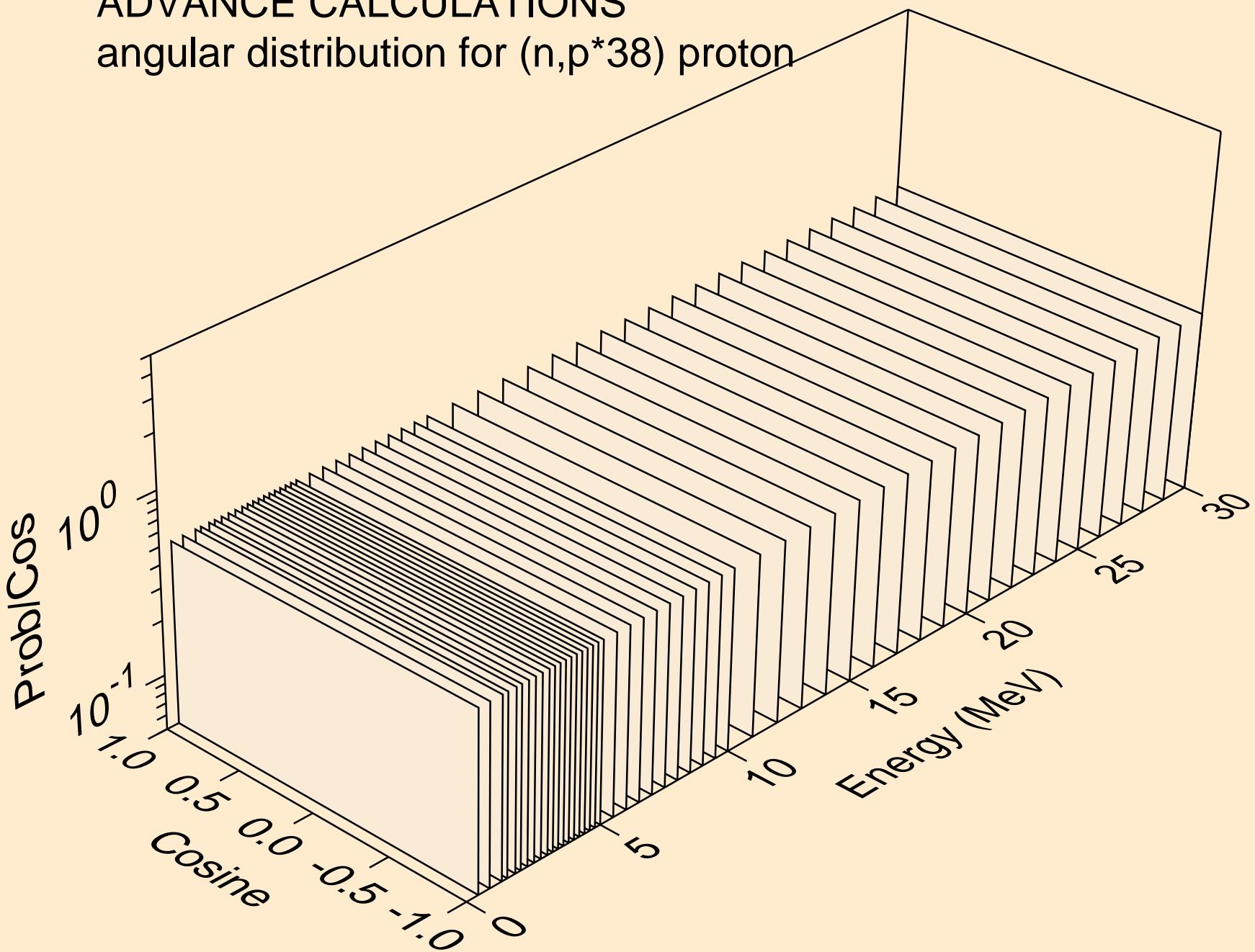
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*37$ ) proton



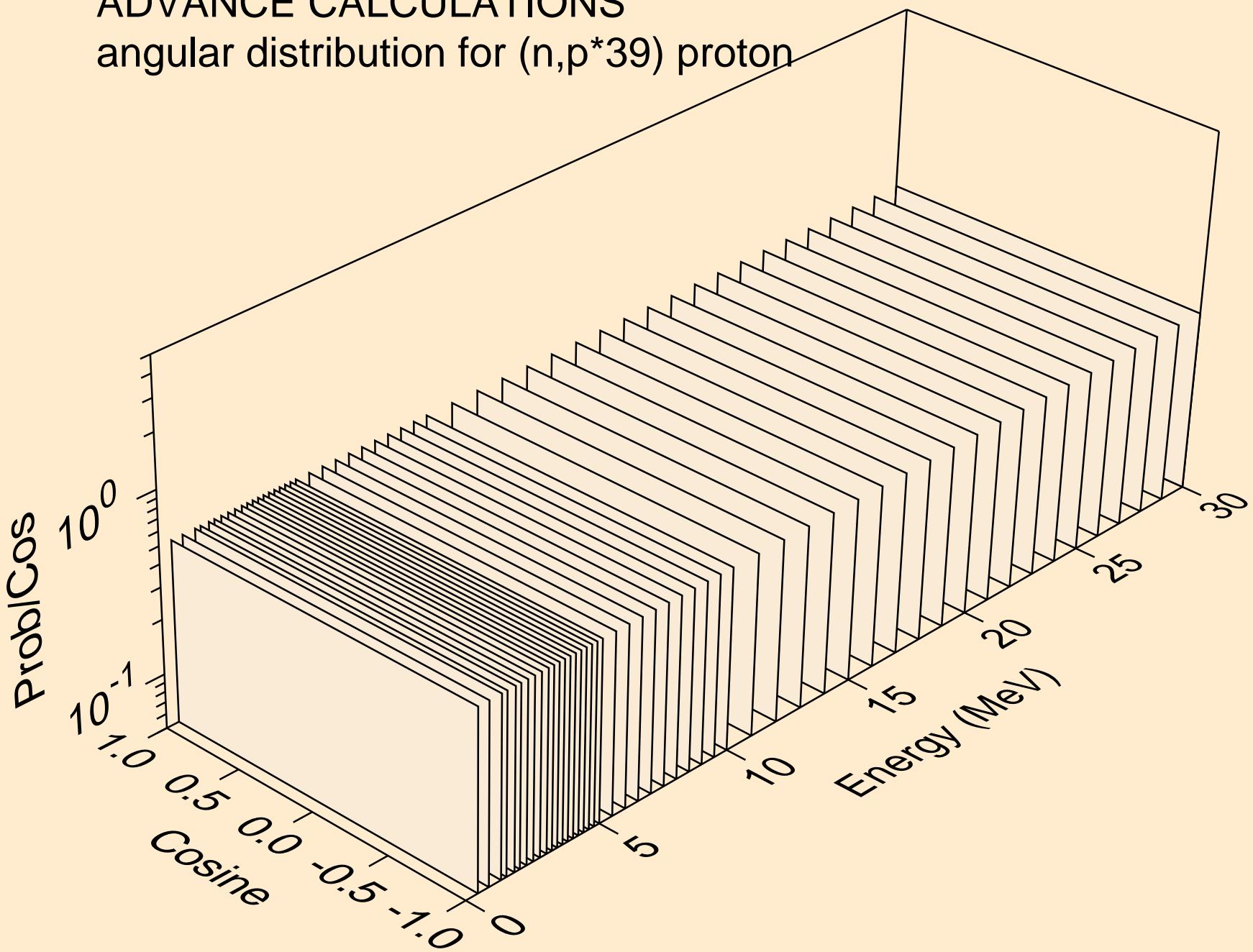
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*38$ ) proton



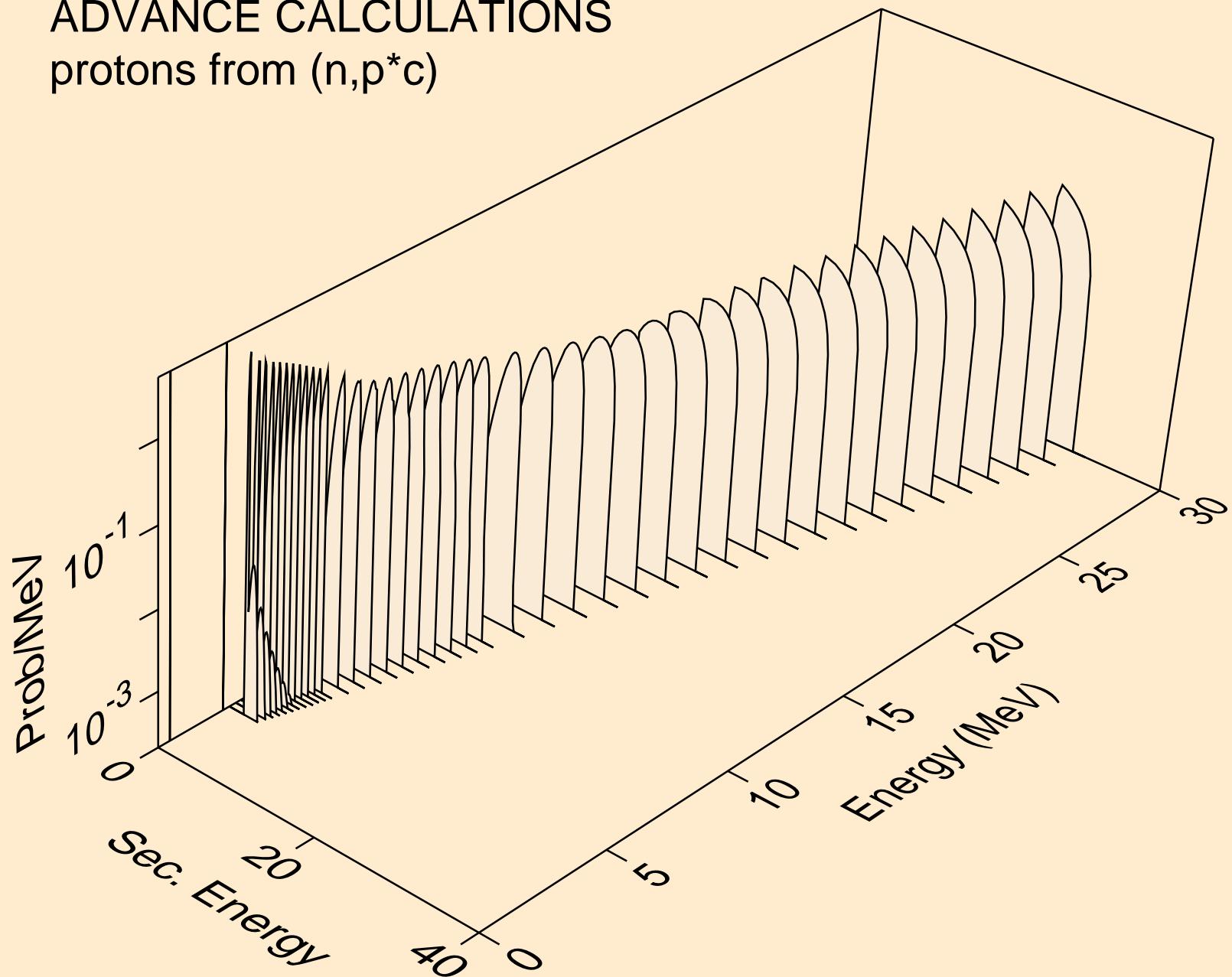
# ADVANCE CALCULATIONS

## angular distribution for ( $n,p^*39$ ) proton



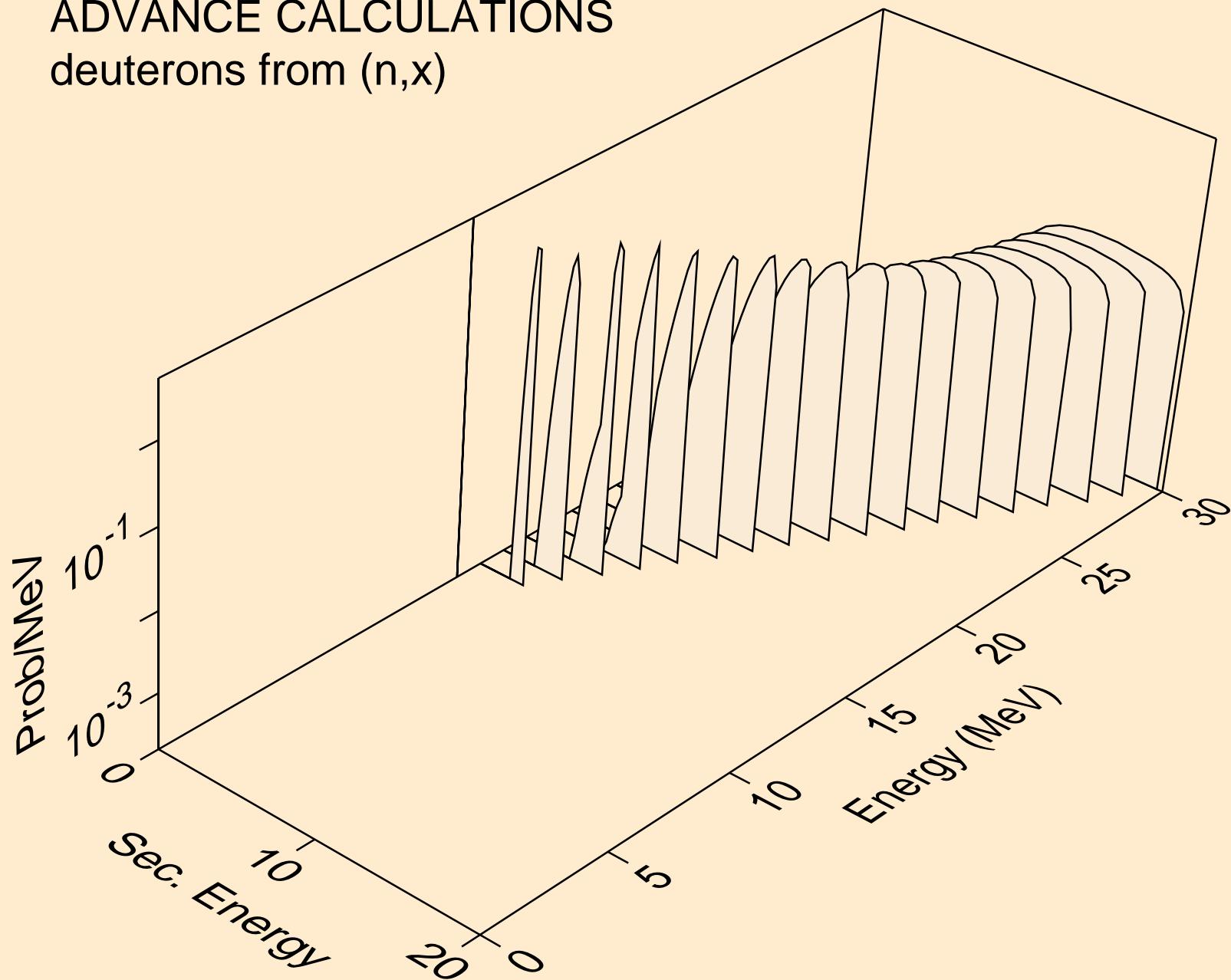
# ADVANCE CALCULATIONS

protons from  $(n,p^*c)$



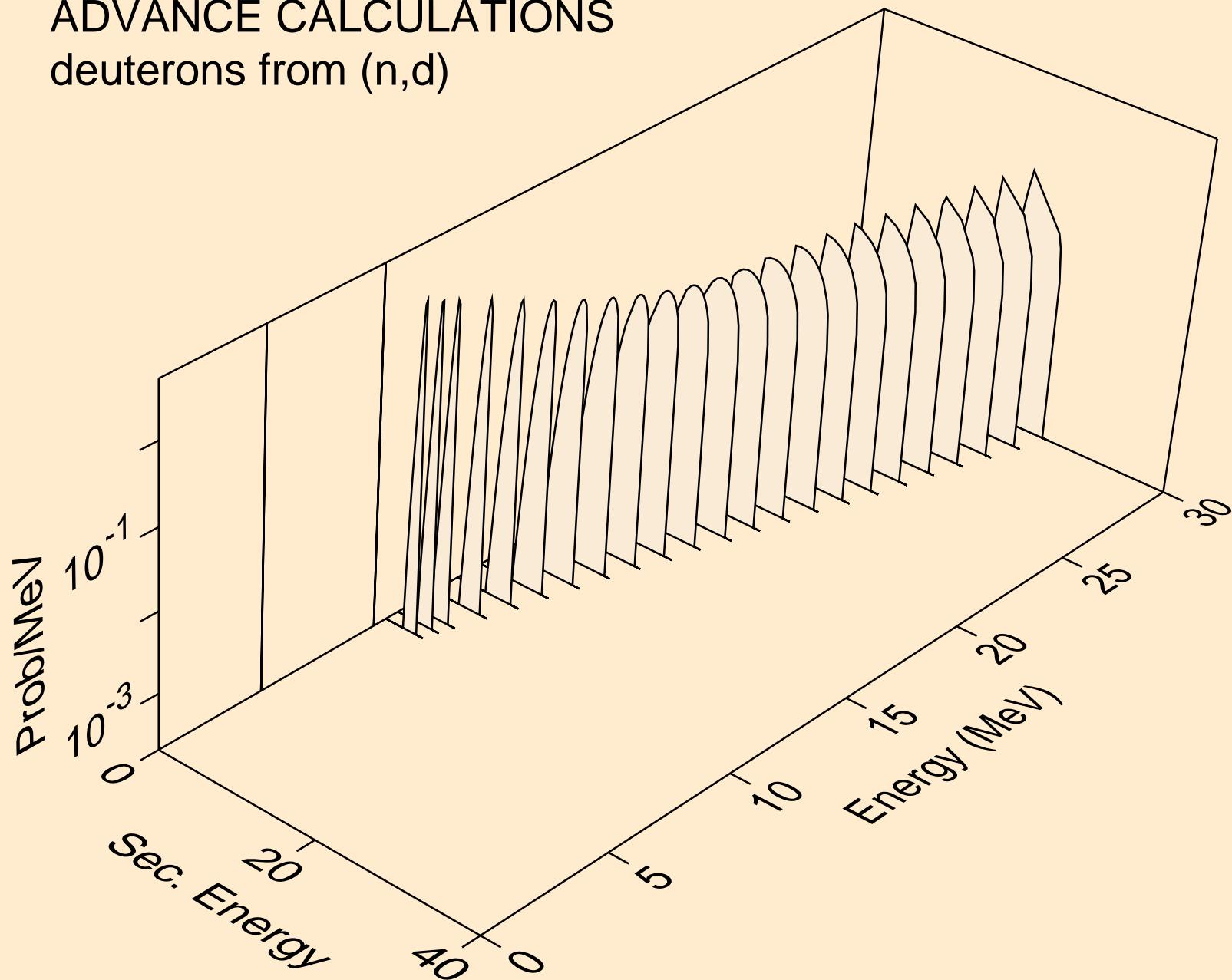
# ADVANCE CALCULATIONS

## deuterons from ( $n,x$ )



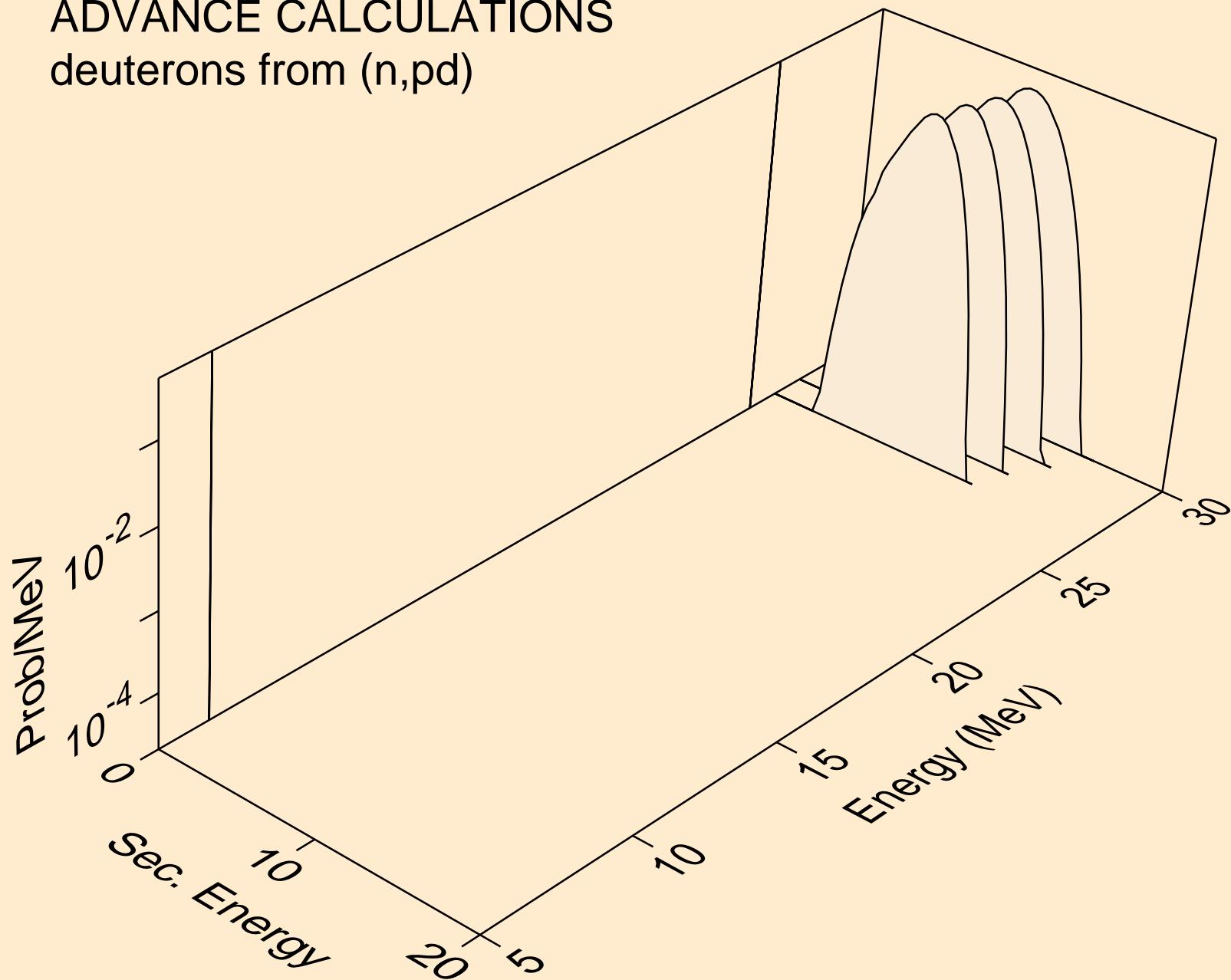
# ADVANCE CALCULATIONS

## deuterons from (n,d)



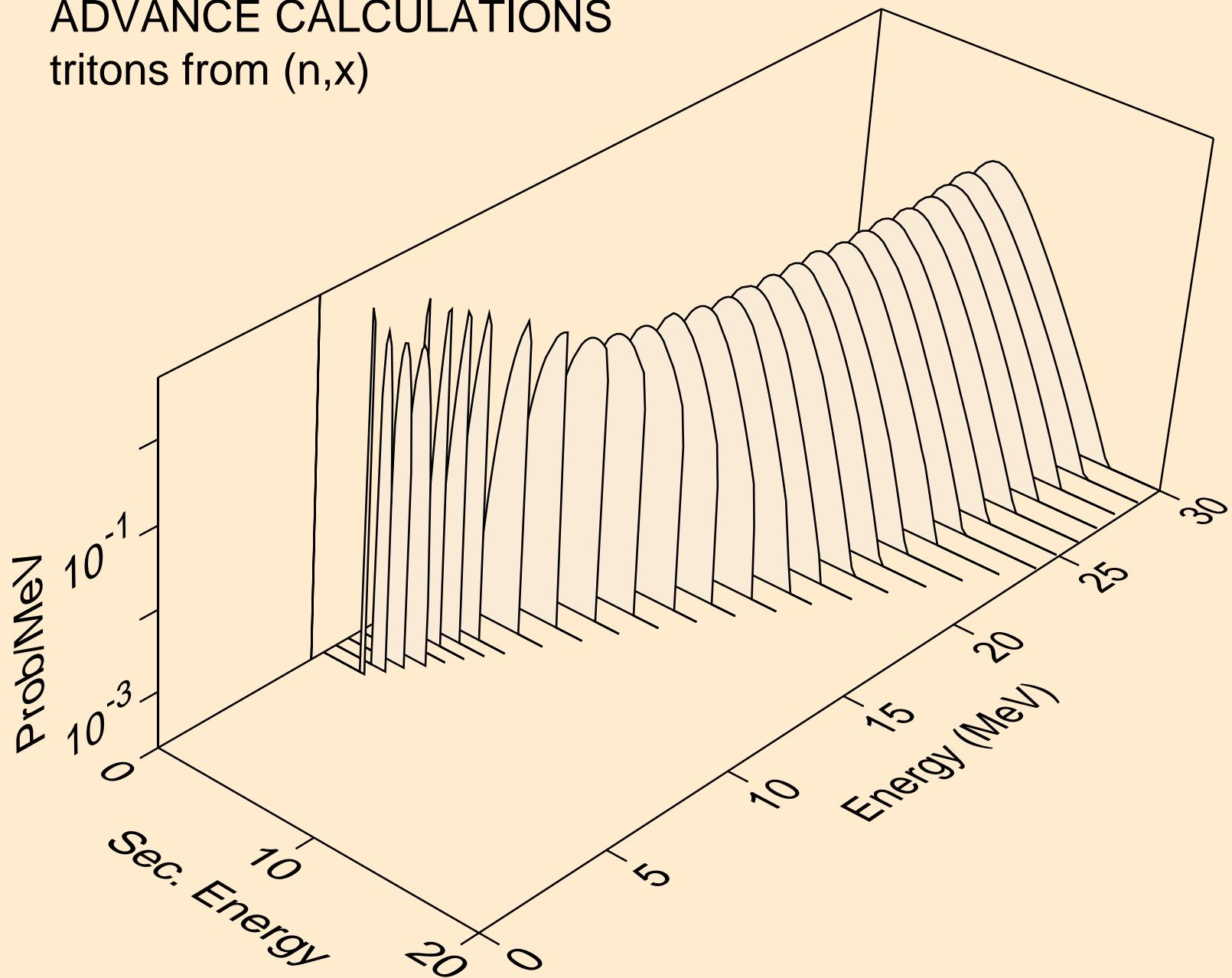
# ADVANCE CALCULATIONS

deuterons from (n,pd)



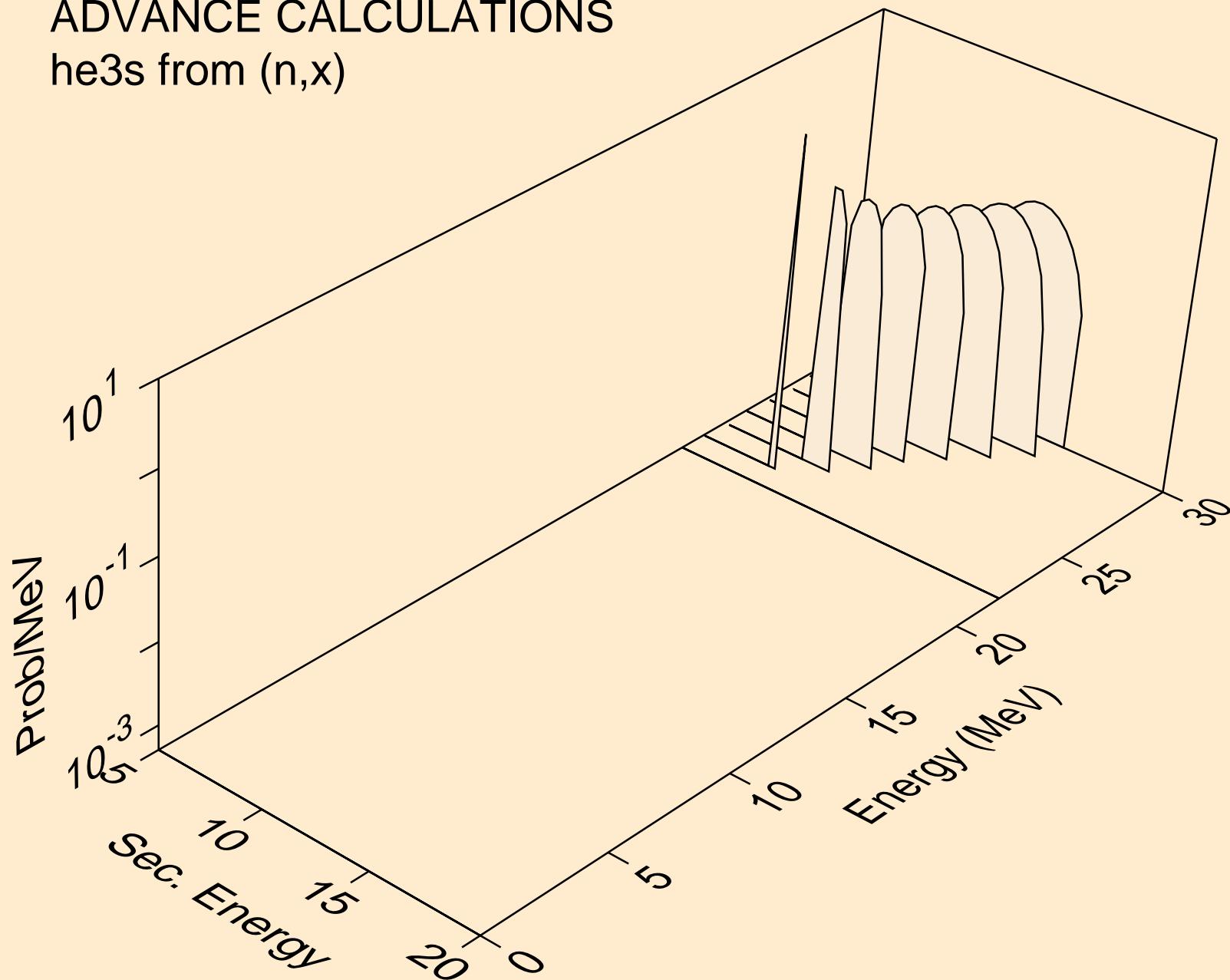
# ADVANCE CALCULATIONS

## tritons from (n,x)



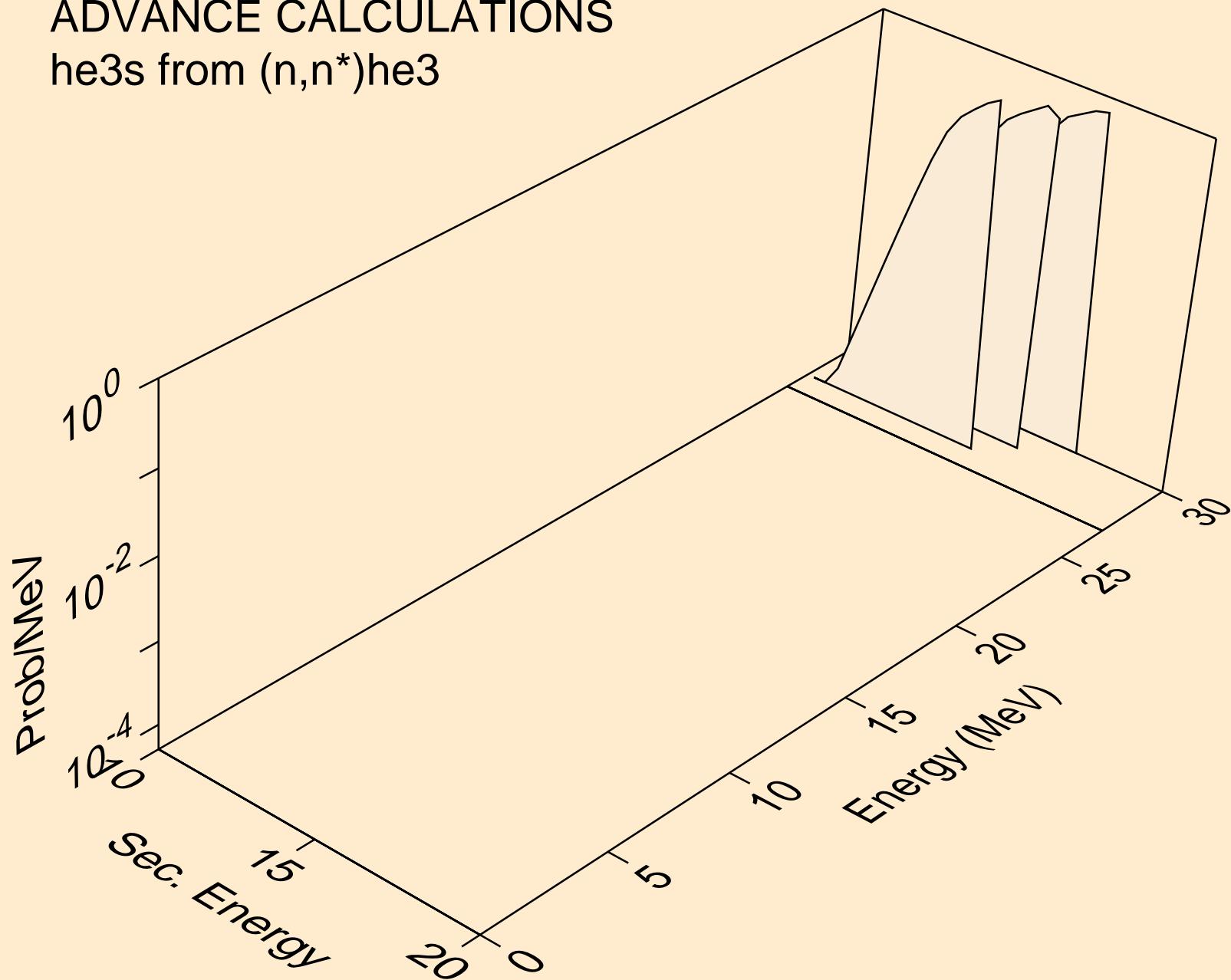
# ADVANCE CALCULATIONS

## he3s from (n,x)



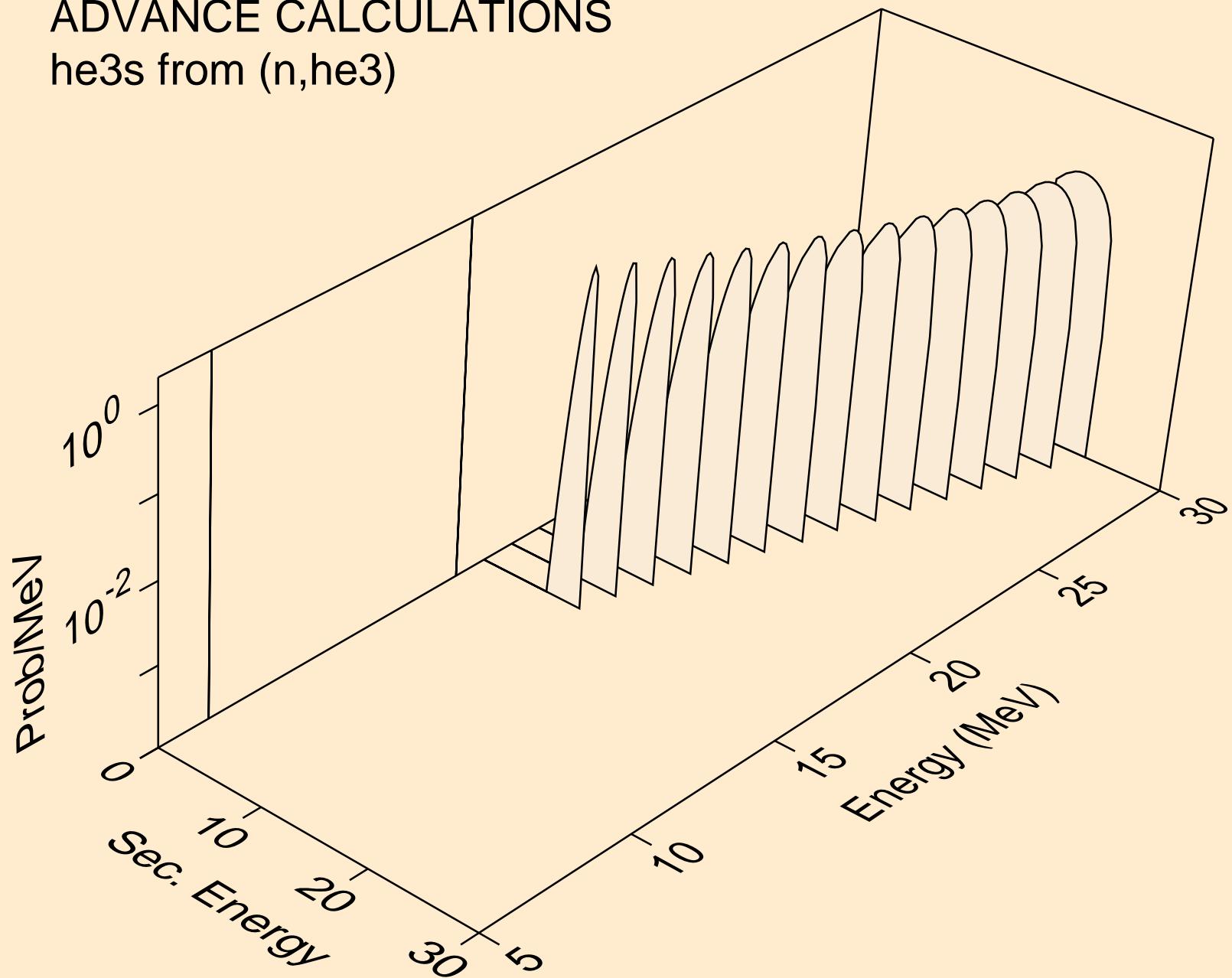
# ADVANCE CALCULATIONS

## he3s from $(n,n^*)\text{he3}$



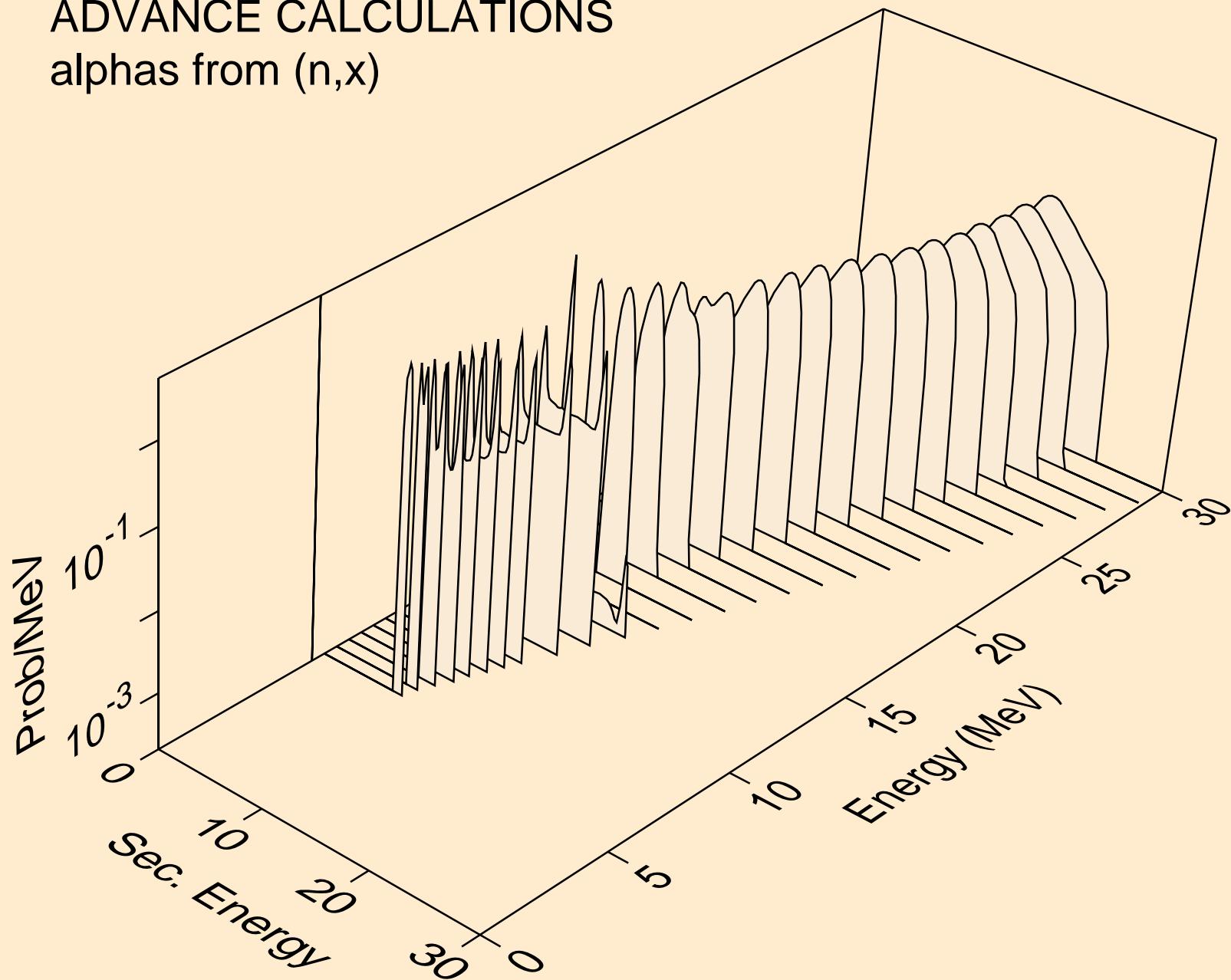
# ADVANCE CALCULATIONS

## he3s from (n,he3)



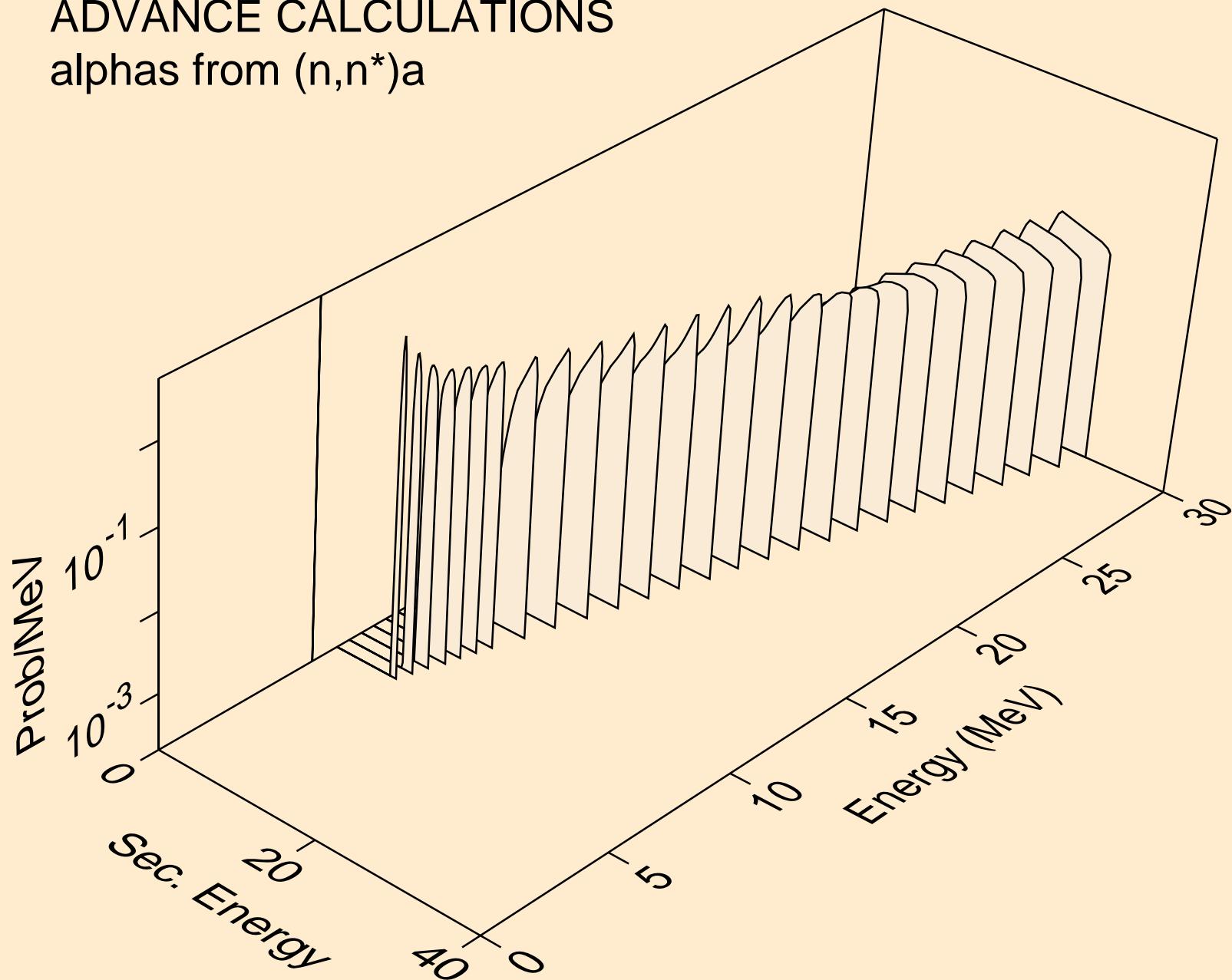
# ADVANCE CALCULATIONS

## alphas from (n,x)



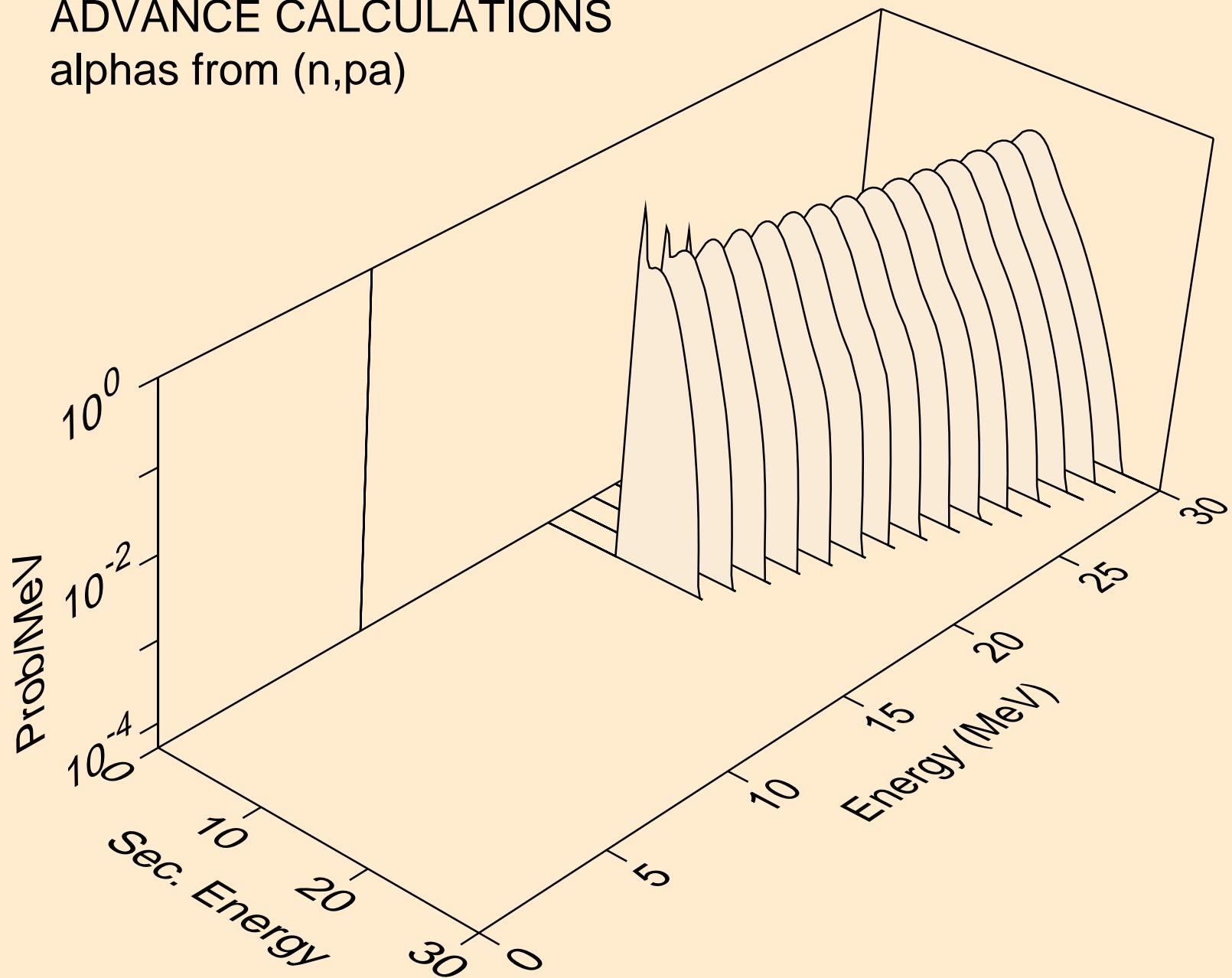
# ADVANCE CALCULATIONS

alphas from  $(n,n^*)a$



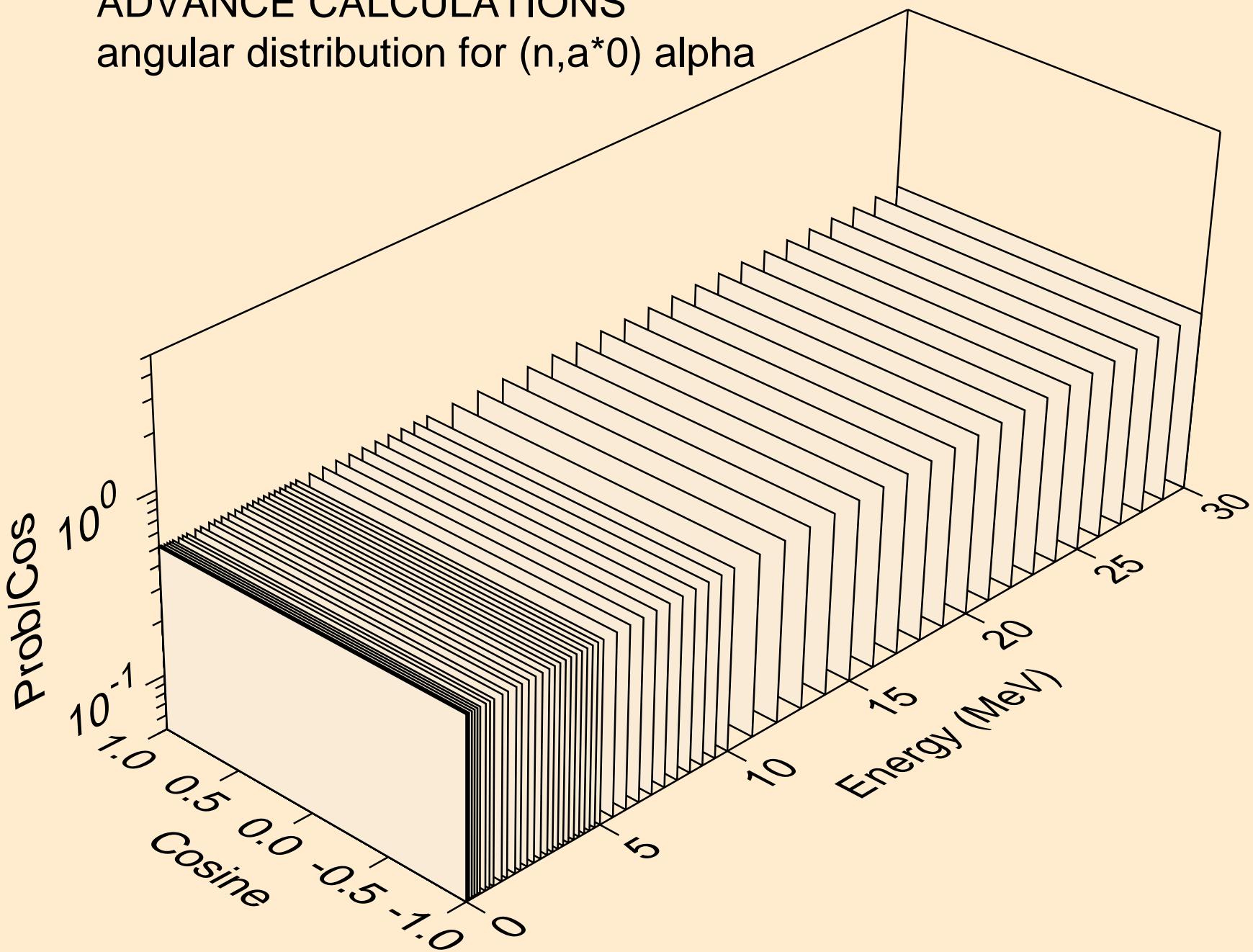
# ADVANCE CALCULATIONS

alphas from (n,pa)



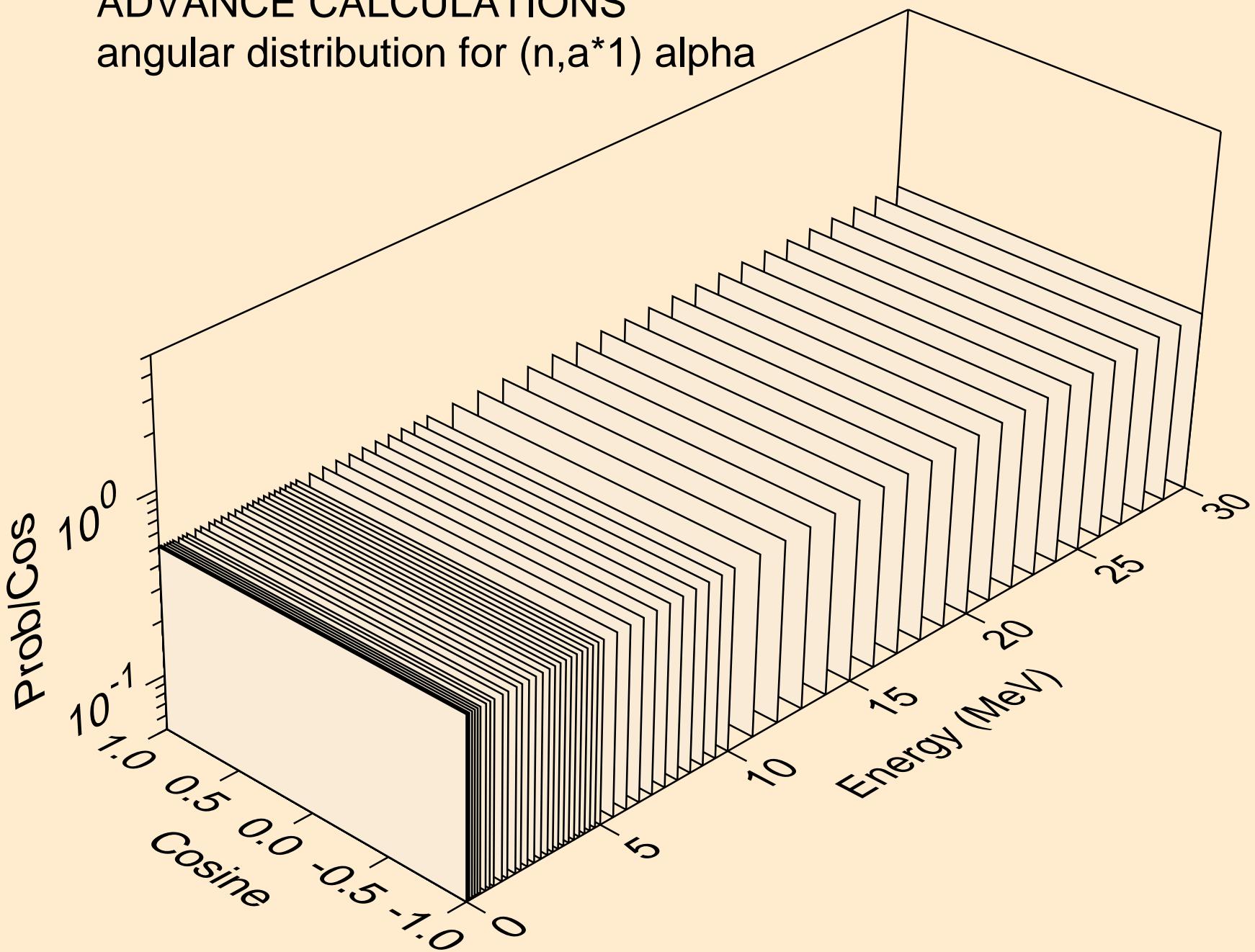
# ADVANCE CALCULATIONS

## angular distribution for $(n,a^*0)$ alpha



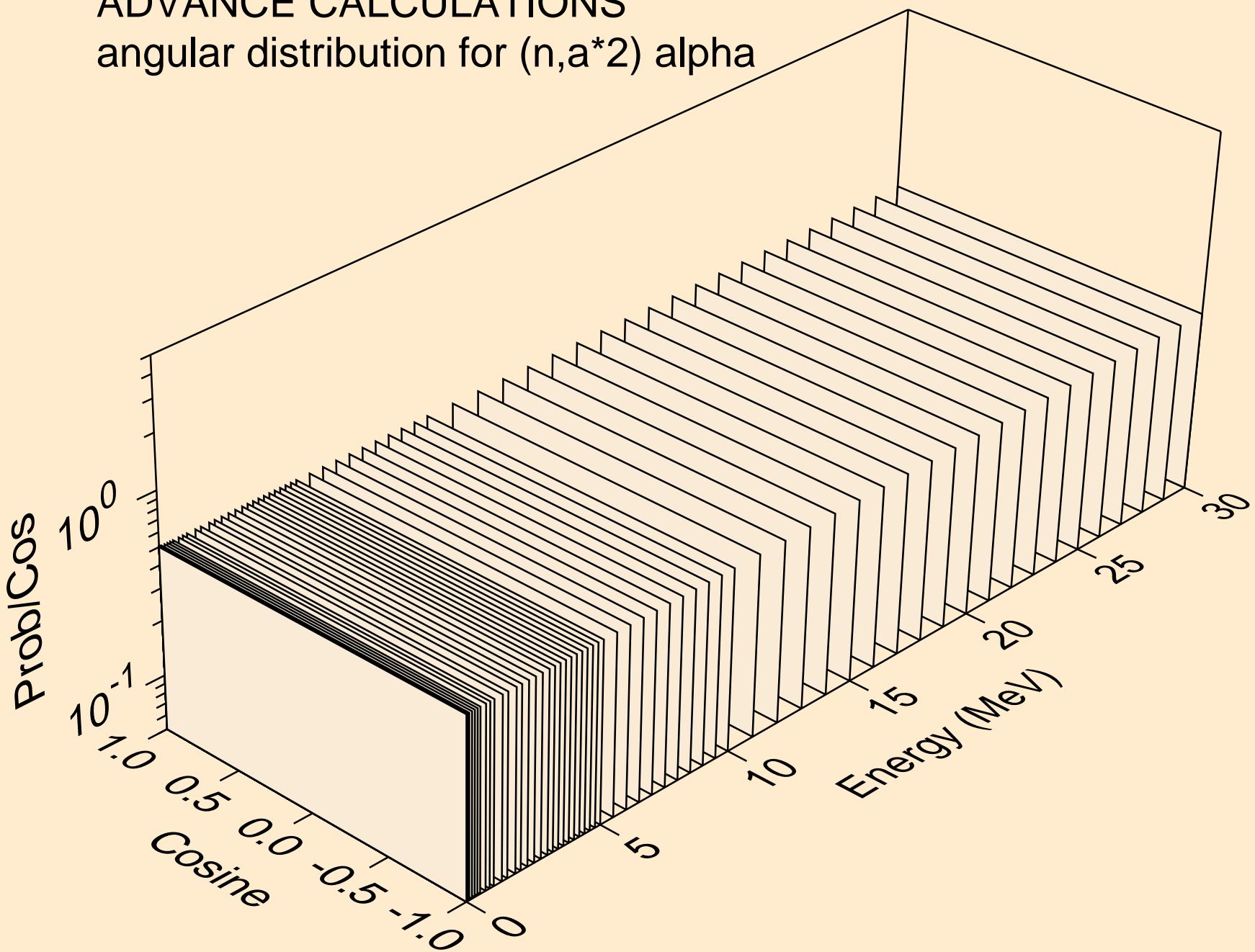
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*1) alpha



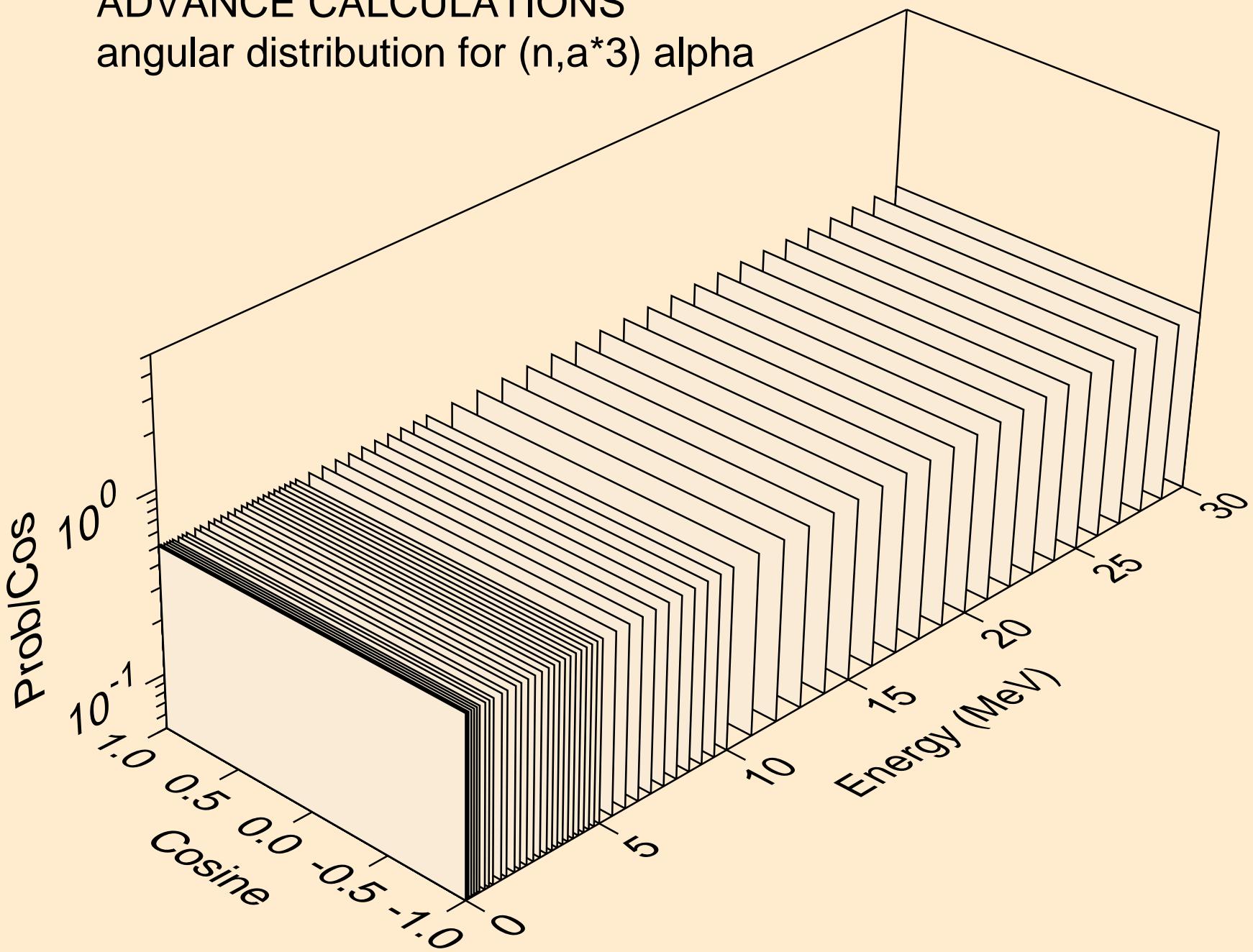
# ADVANCE CALCULATIONS

## angular distribution for $(n,a^*2)$ alpha



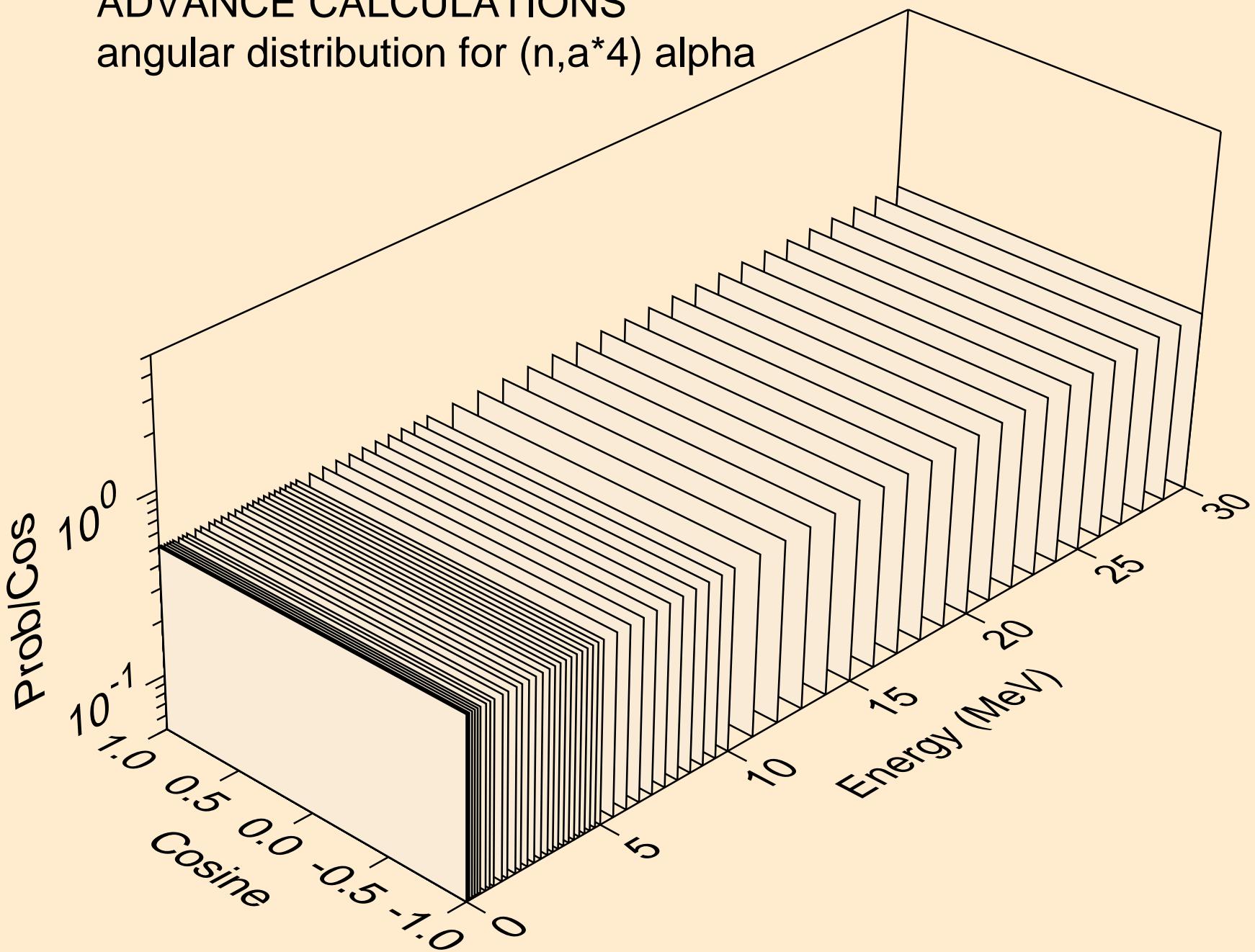
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*3) alpha



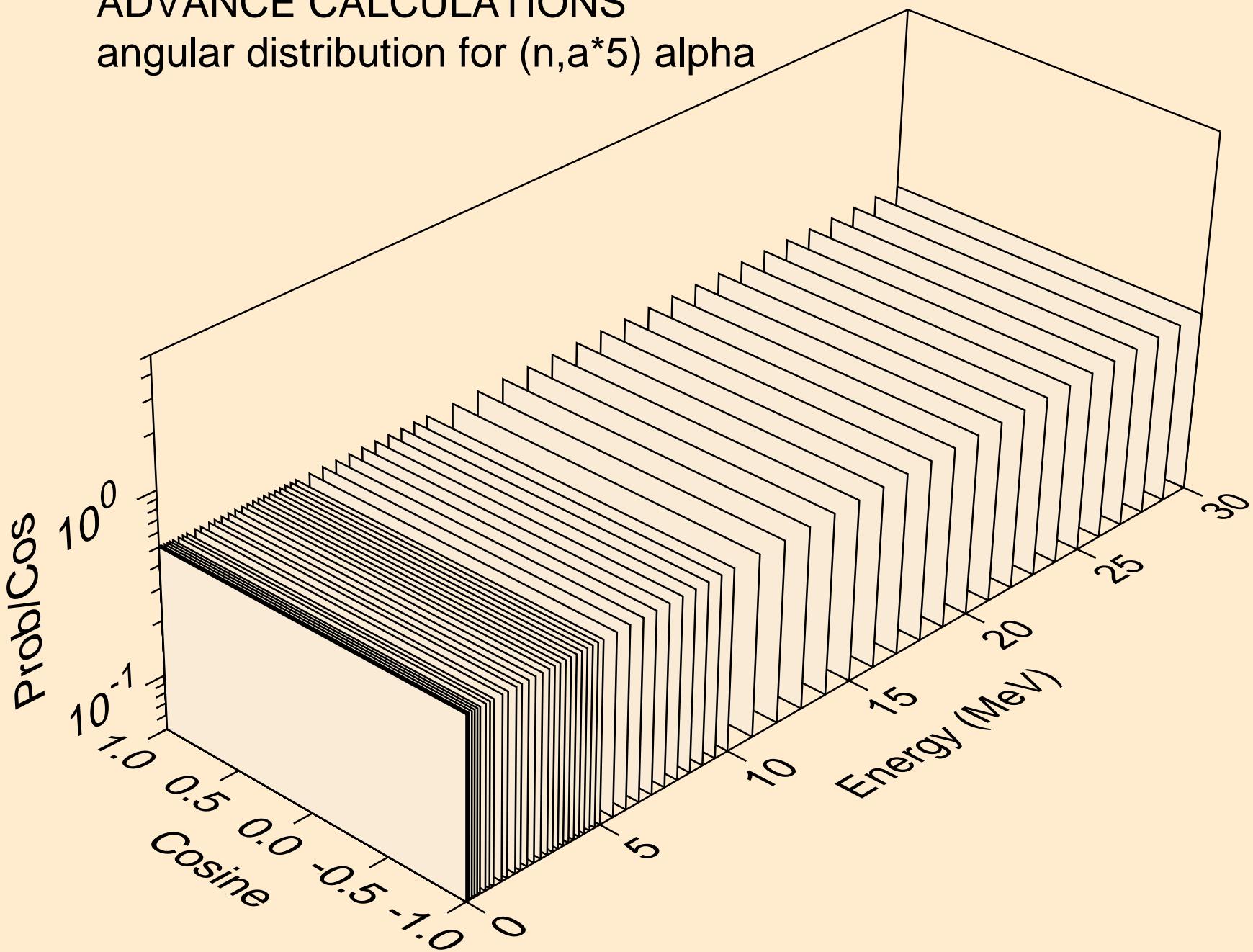
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*4) alpha



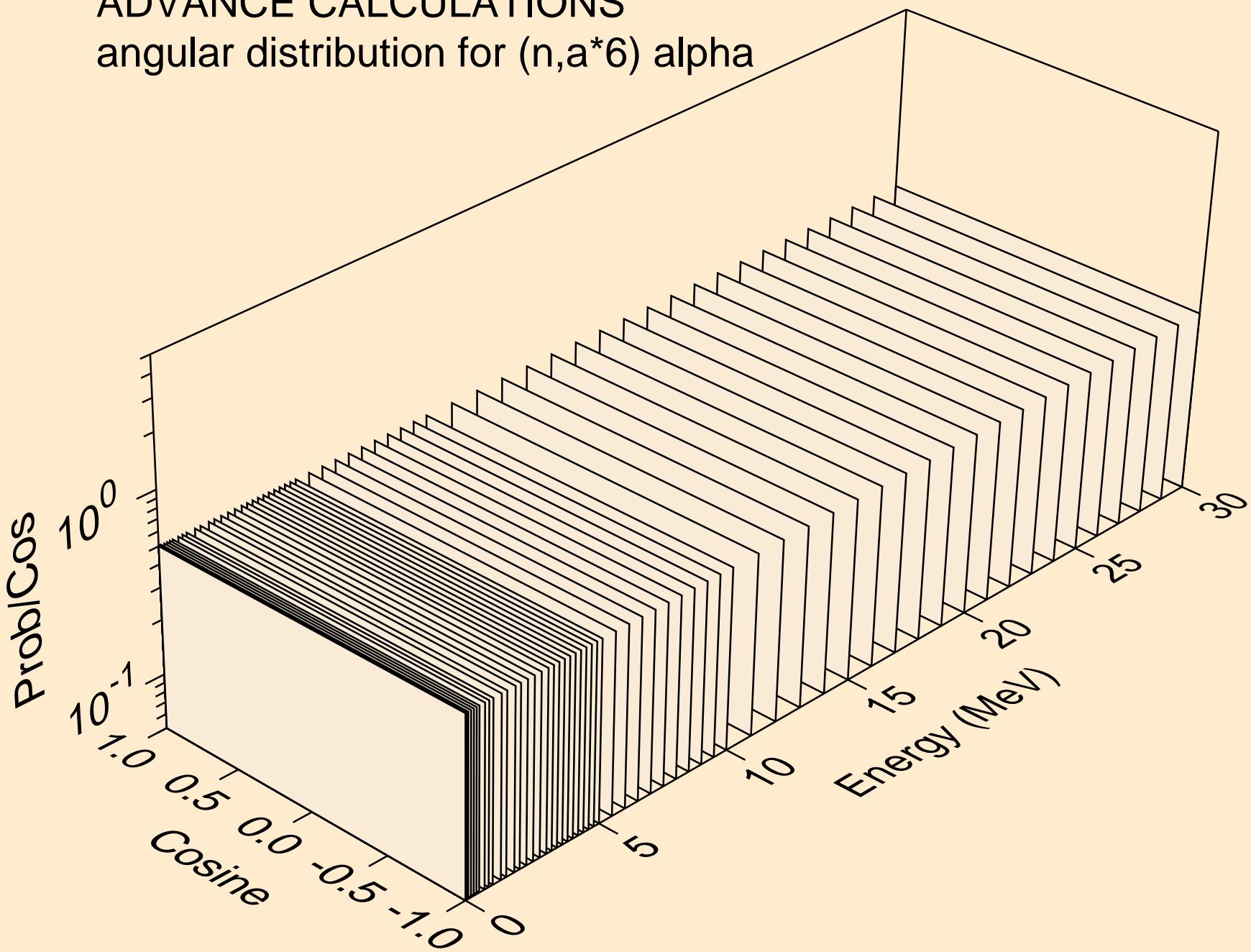
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*5) alpha



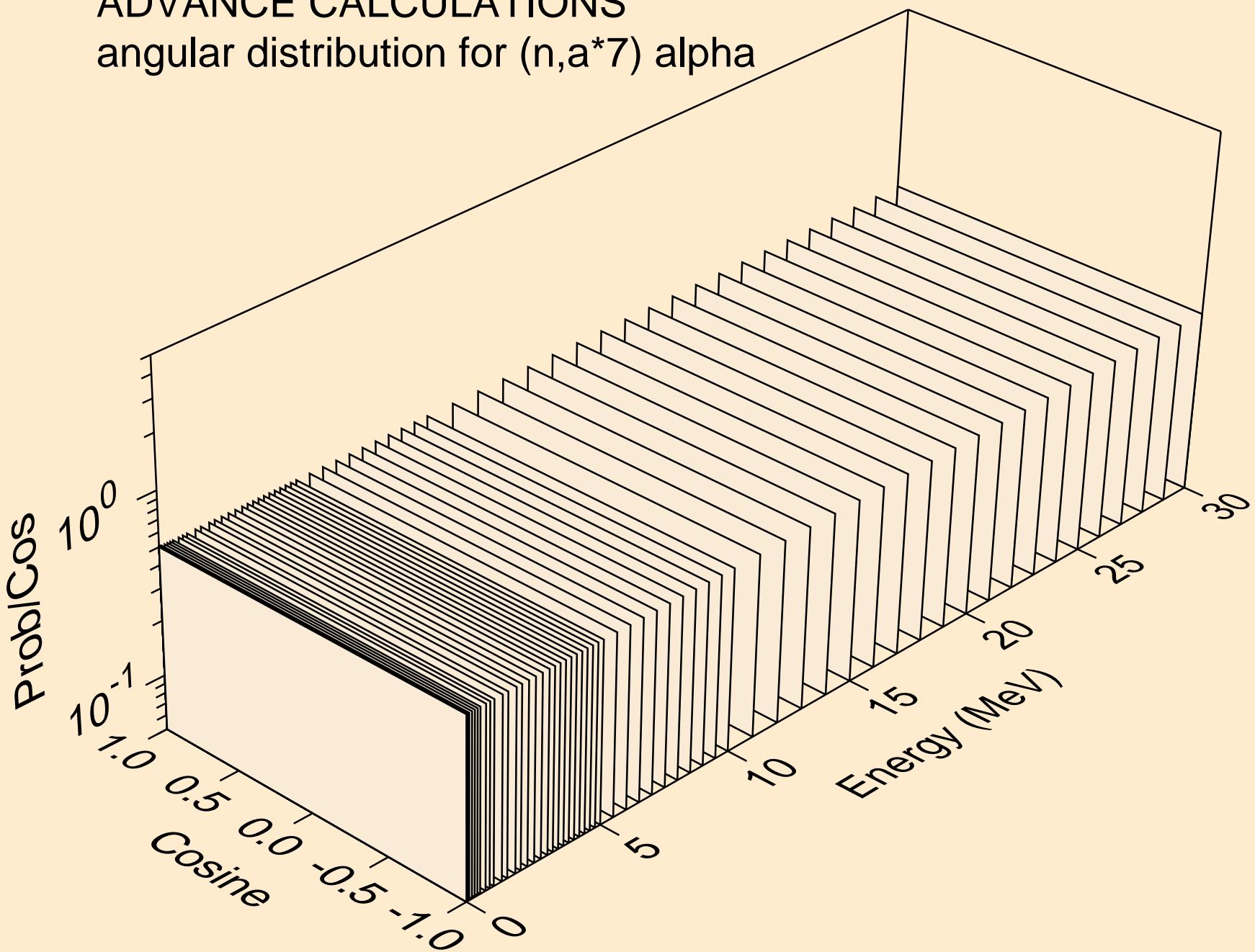
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*6) alpha



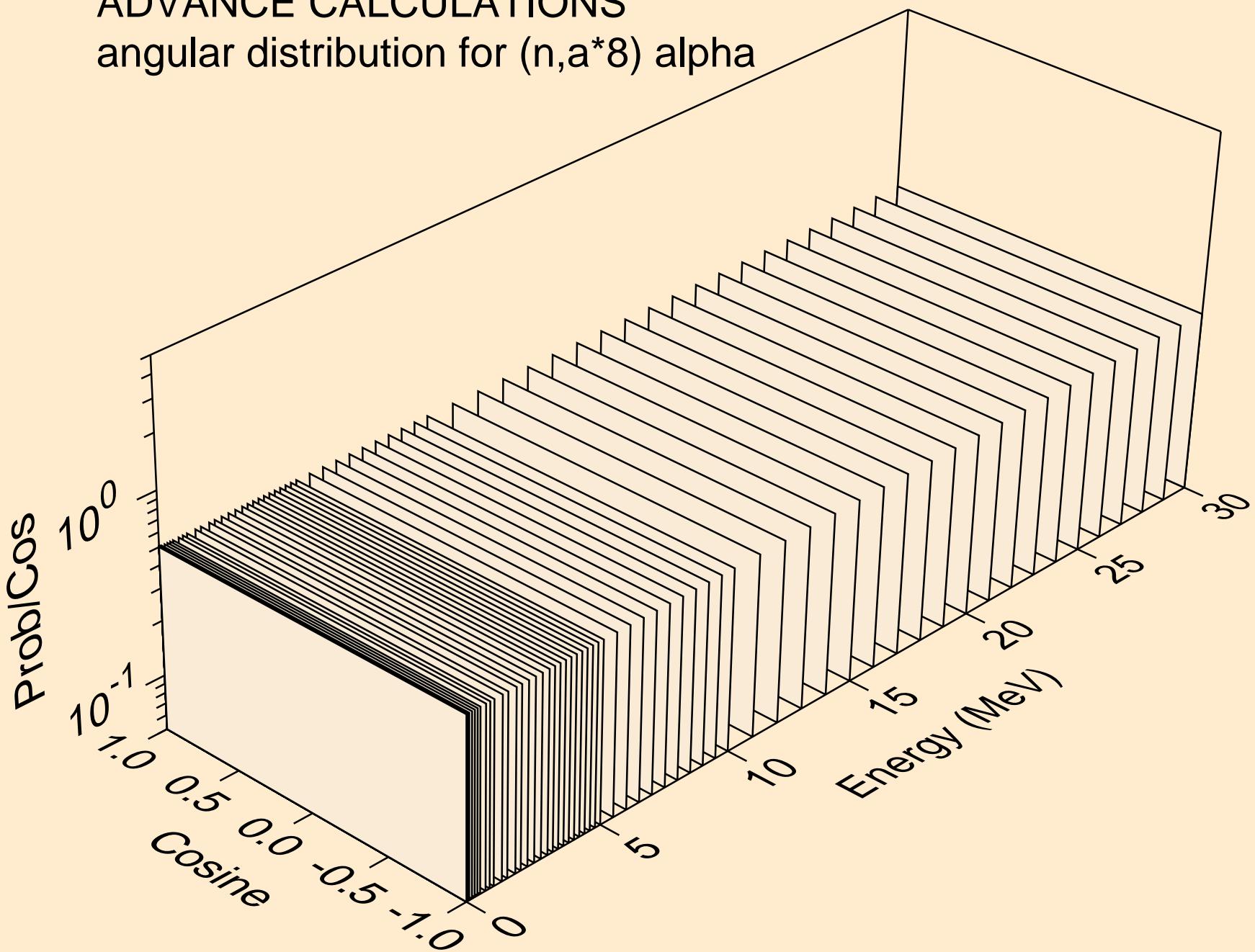
# ADVANCE CALCULATIONS

## angular distribution for ( $n,a^*7$ ) alpha



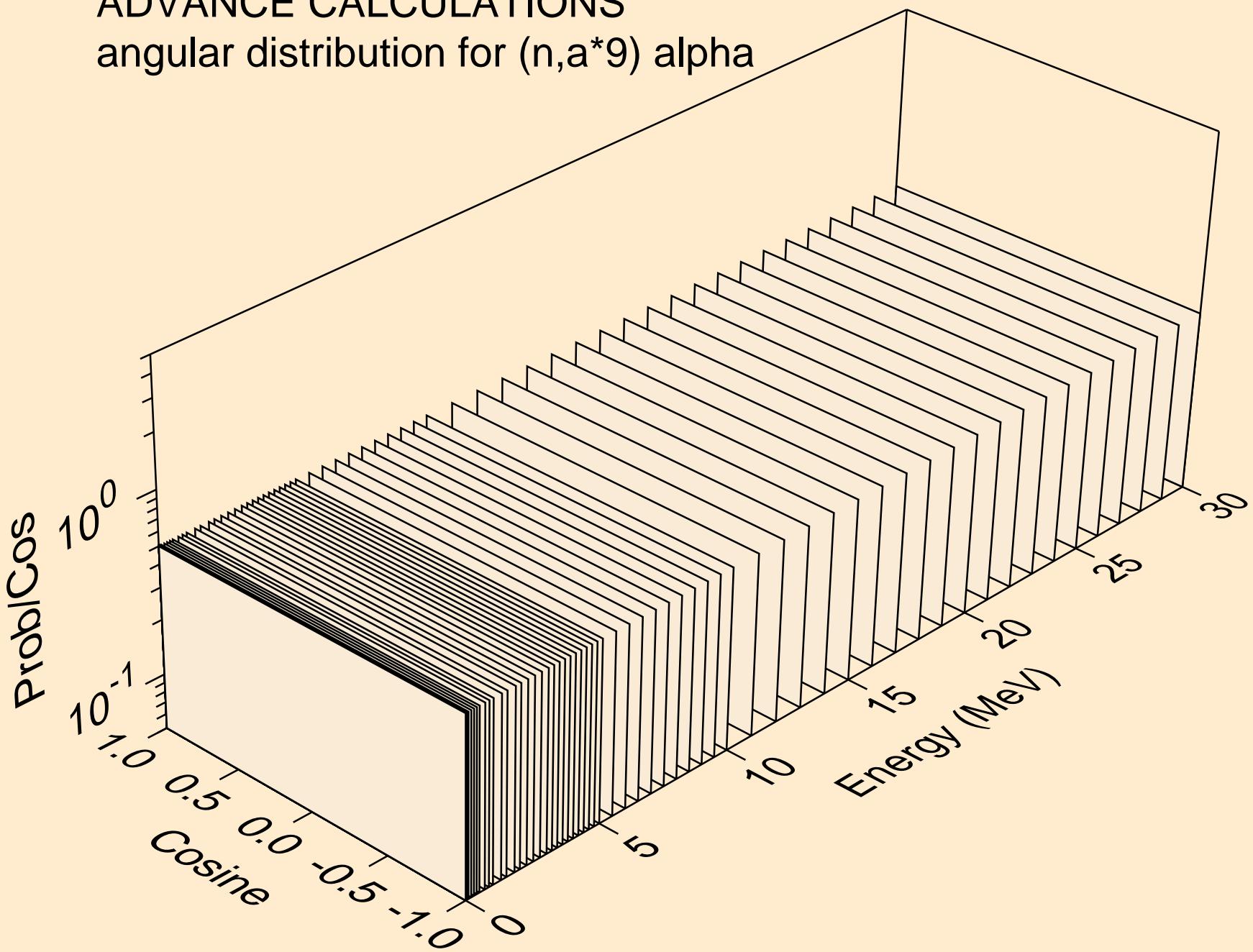
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*8) alpha



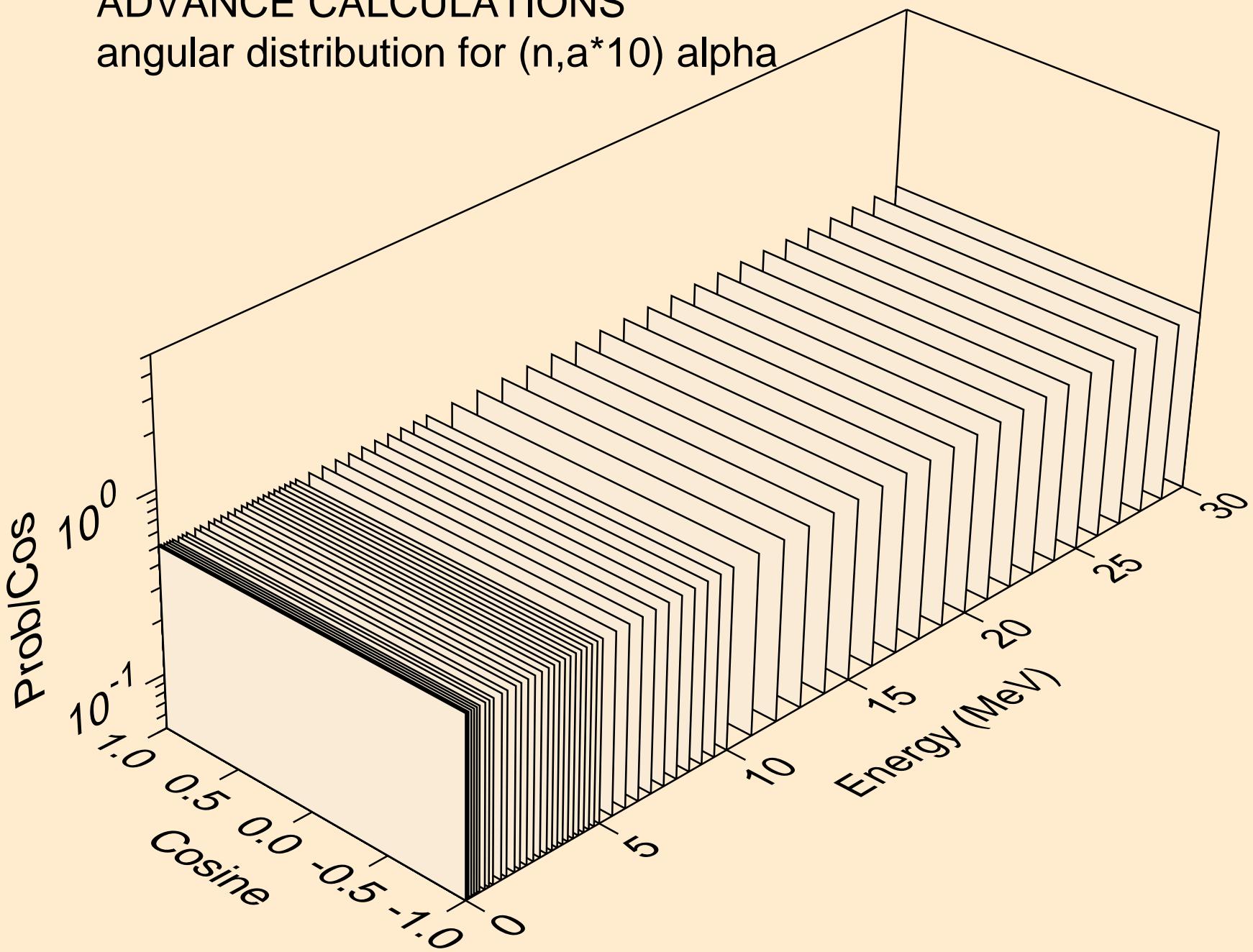
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*9) alpha



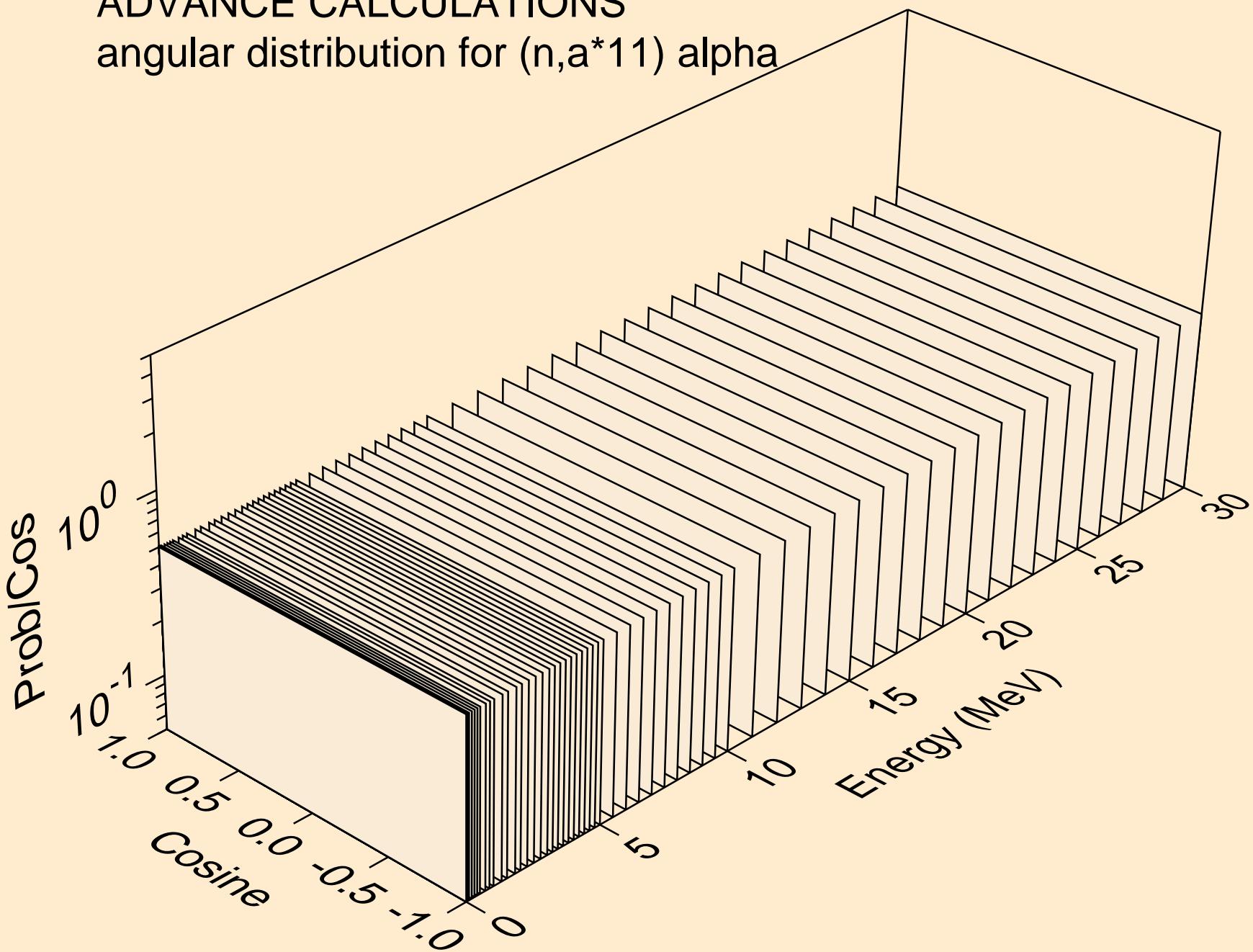
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*10) alpha



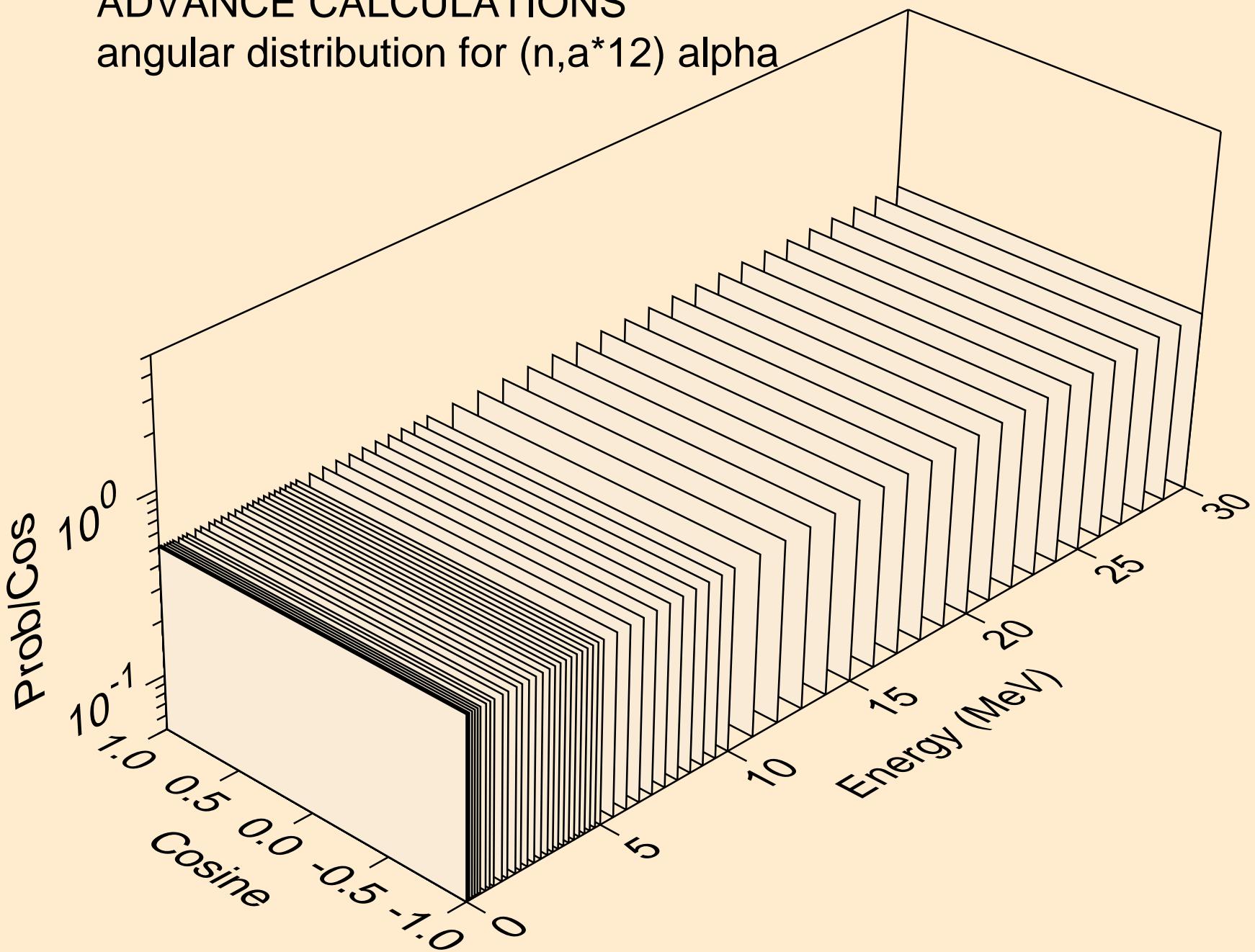
# ADVANCE CALCULATIONS

angular distribution for (n,a\*11) alpha



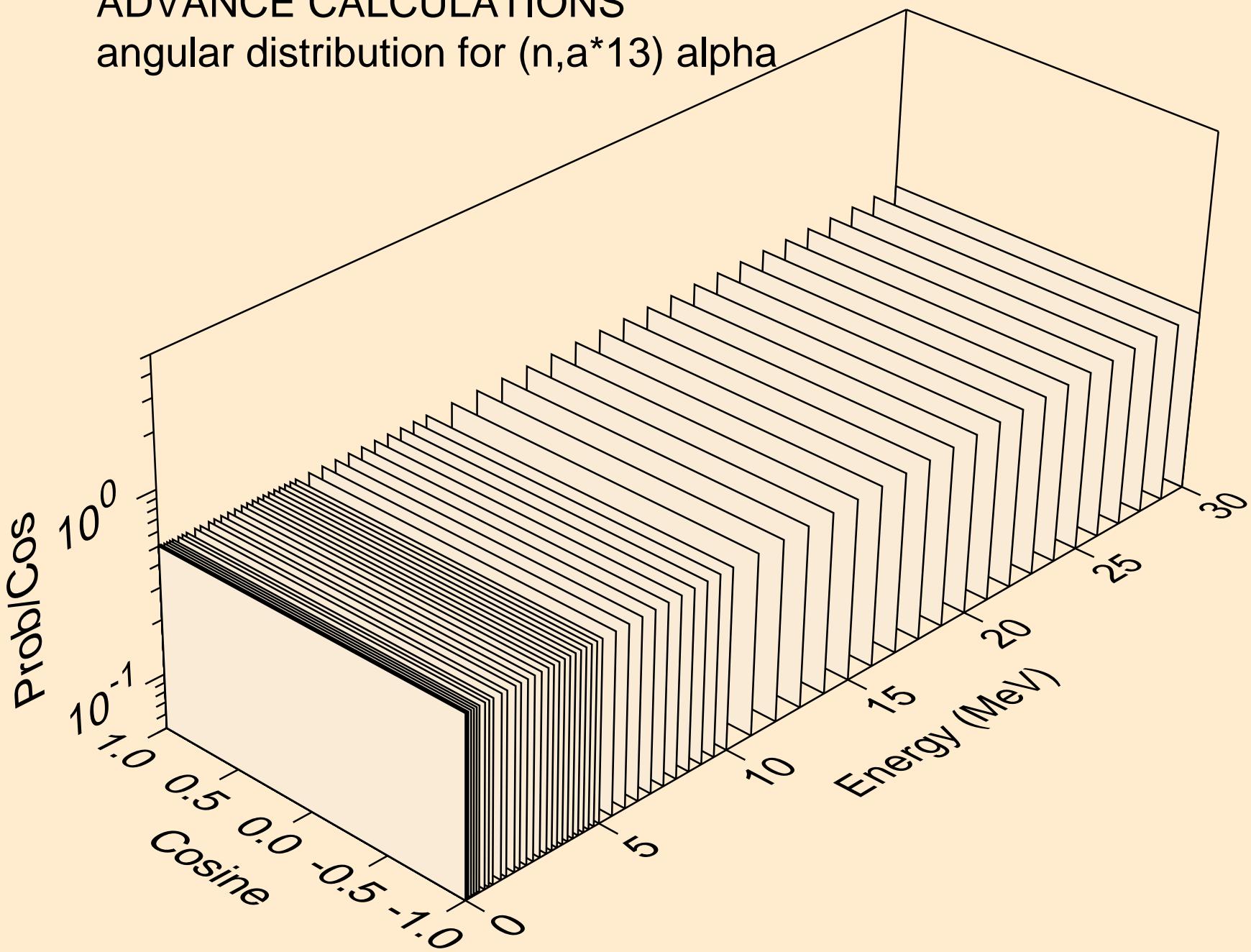
# ADVANCE CALCULATIONS

## angular distribution for ( $n, a^* 12$ ) alpha



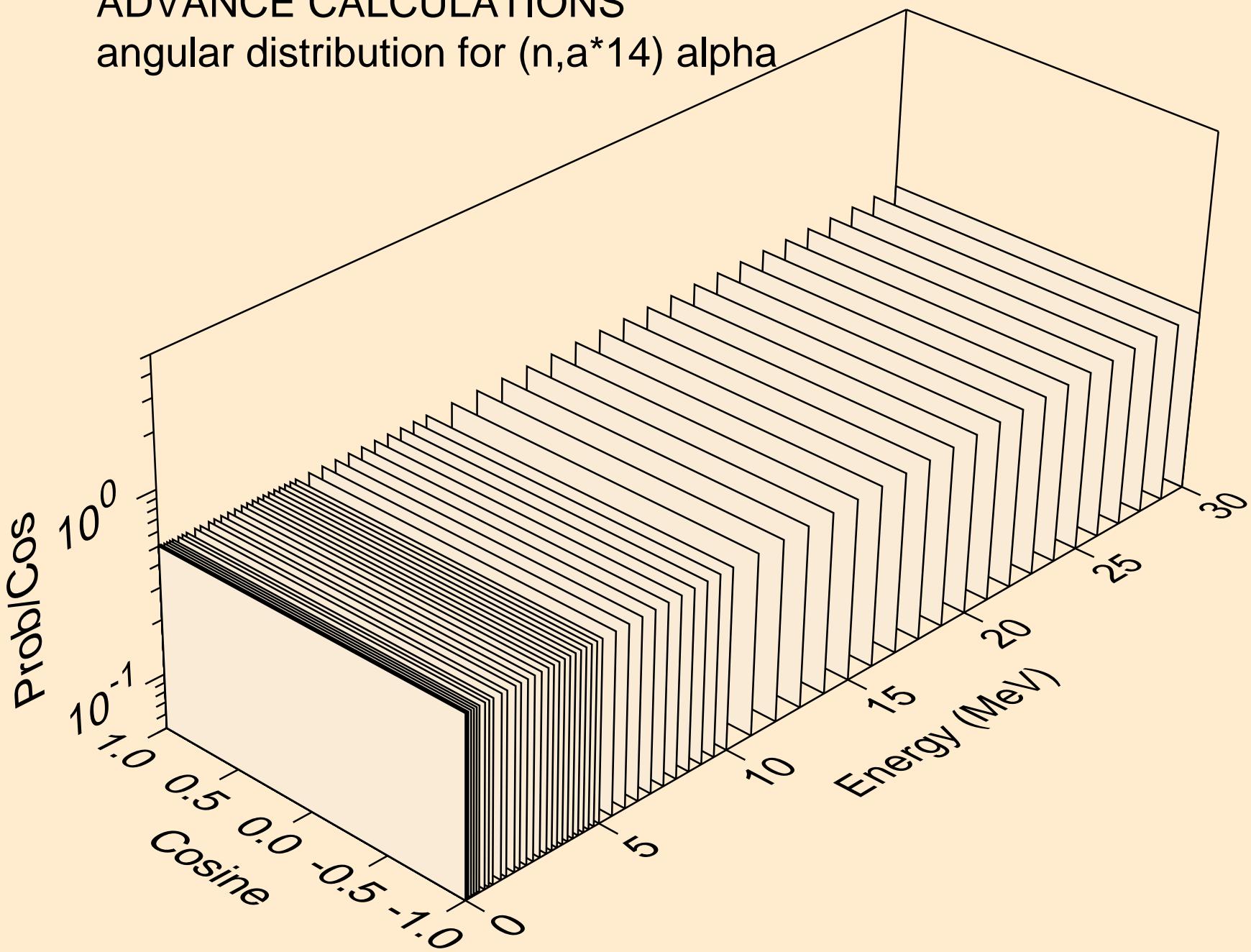
# ADVANCE CALCULATIONS

## angular distribution for ( $n,a^*13$ ) alpha



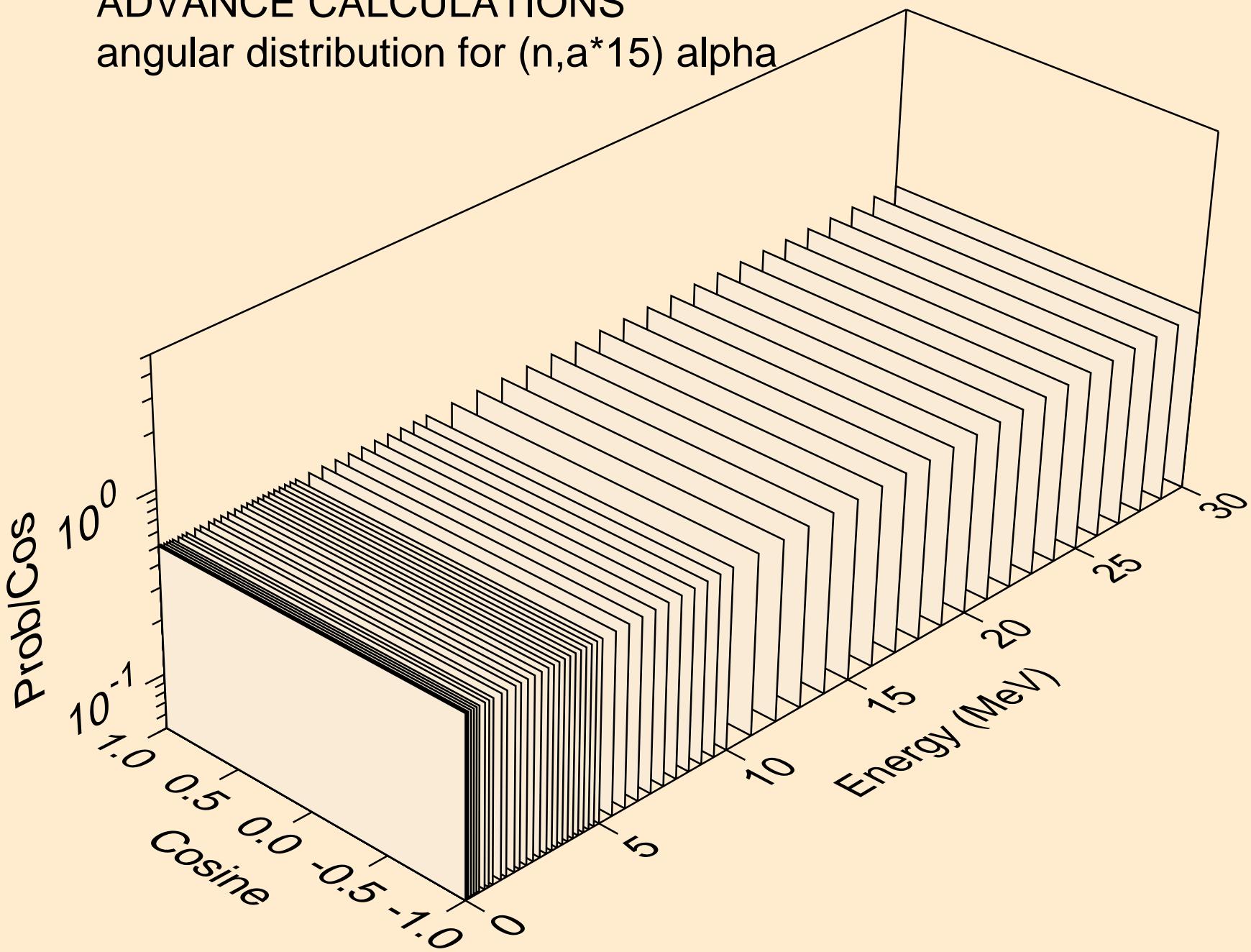
# ADVANCE CALCULATIONS

## angular distribution for ( $n,a^*14$ ) alpha



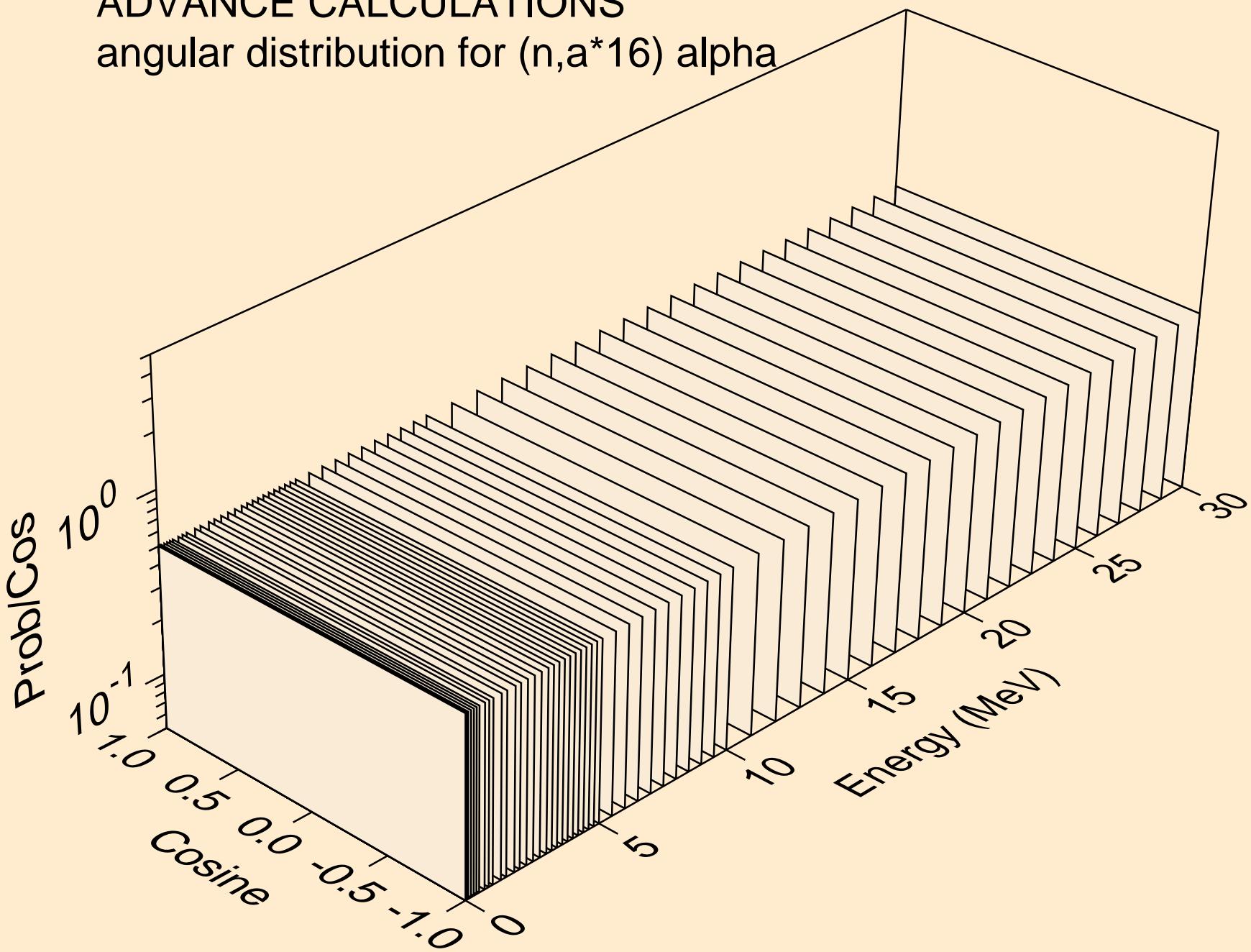
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*15) alpha



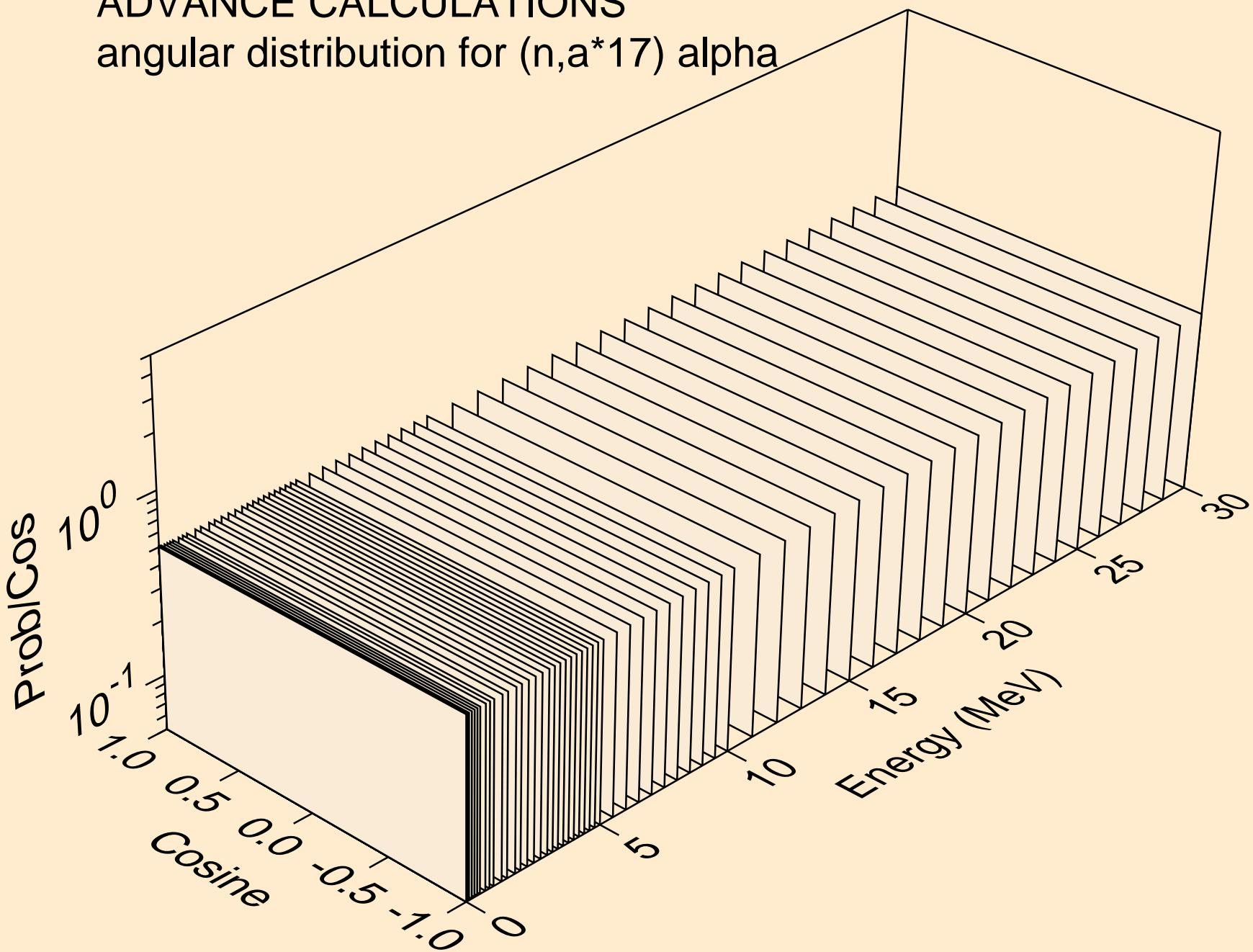
# ADVANCE CALCULATIONS

## angular distribution for ( $n,a^*16$ ) alpha



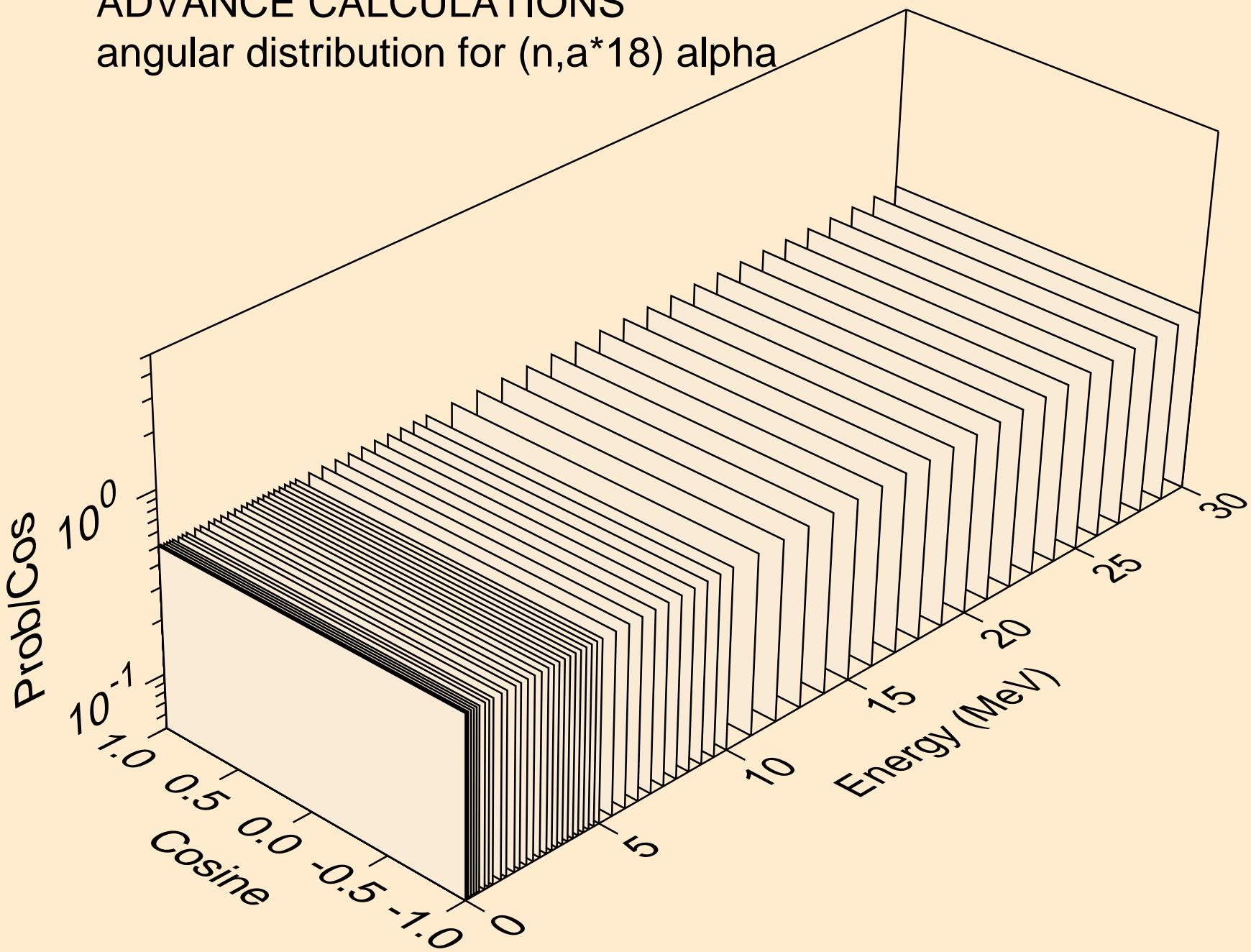
# ADVANCE CALCULATIONS

## angular distribution for ( $n,a^*17$ ) alpha



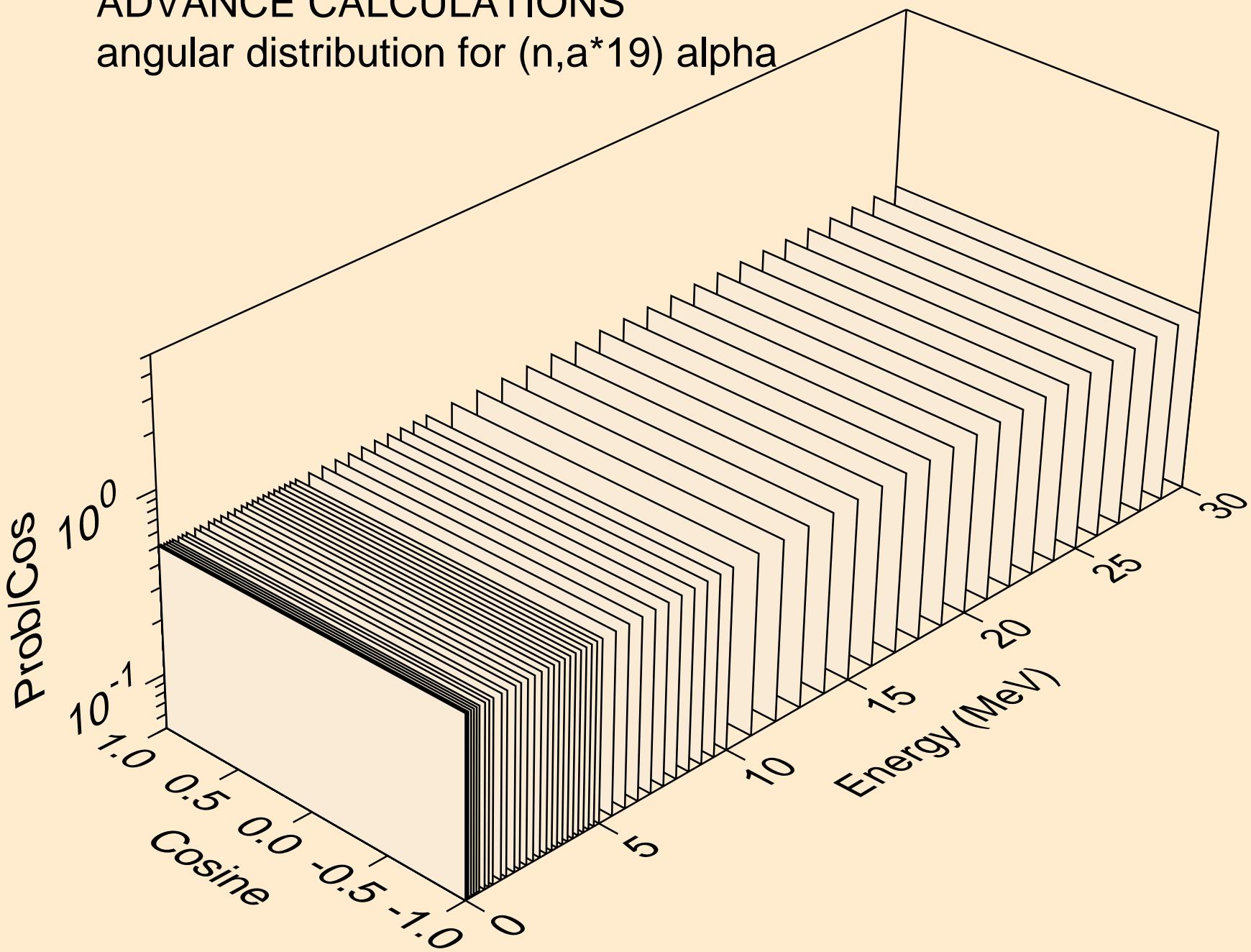
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*18) alpha



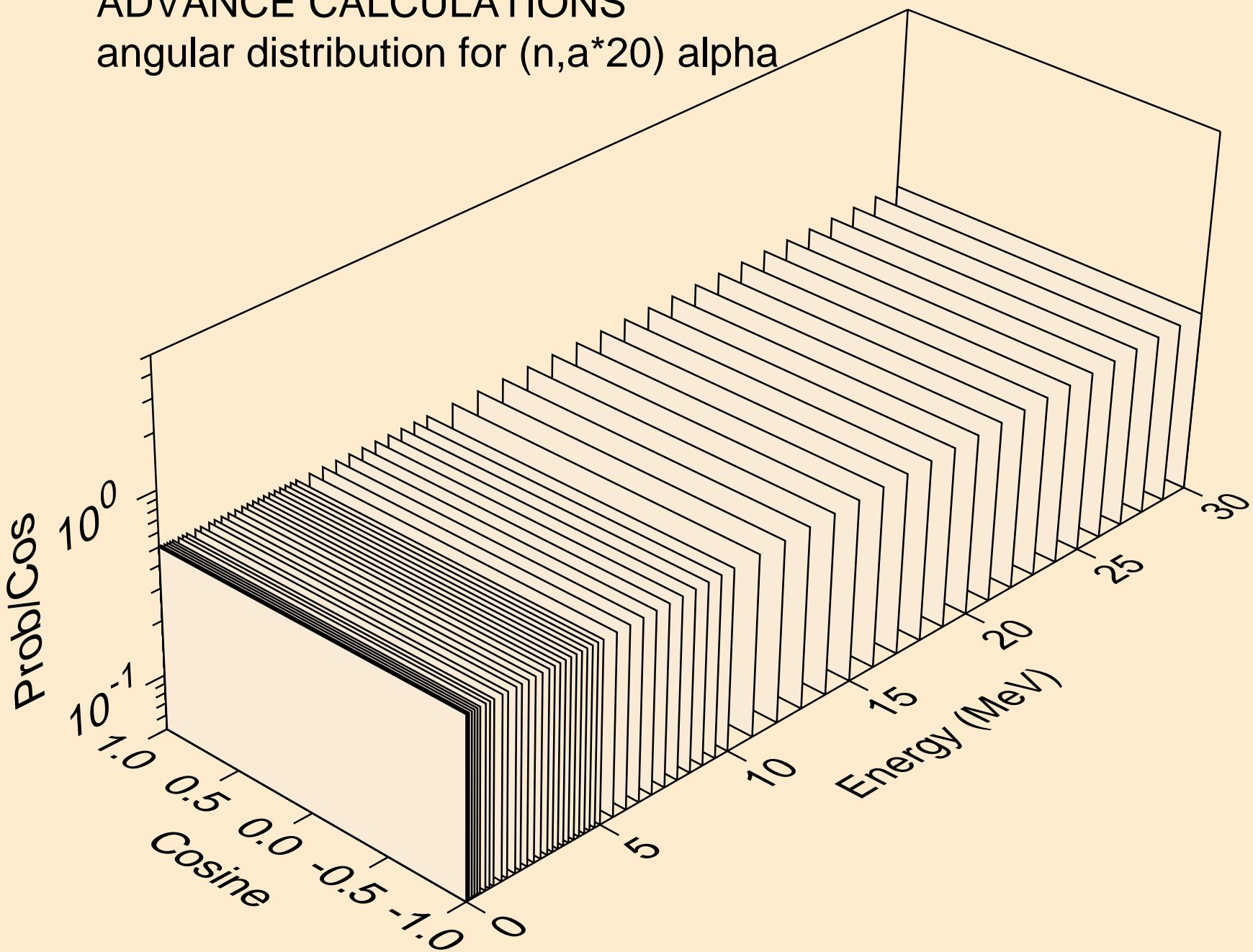
# ADVANCE CALCULATIONS

## angular distribution for (n,a\*19) alpha



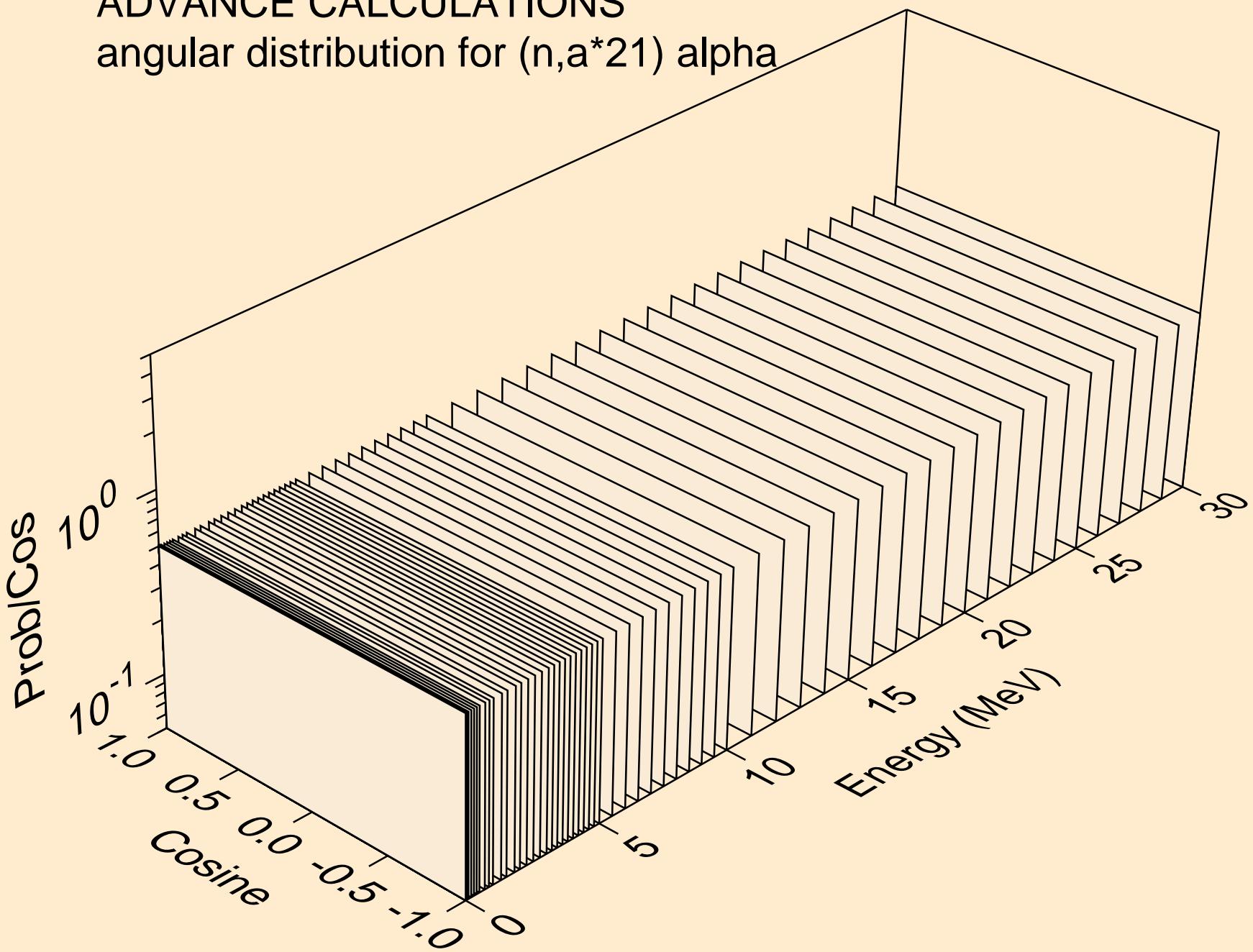
# ADVANCE CALCULATIONS

angular distribution for  $(n,a^*20) \alpha$



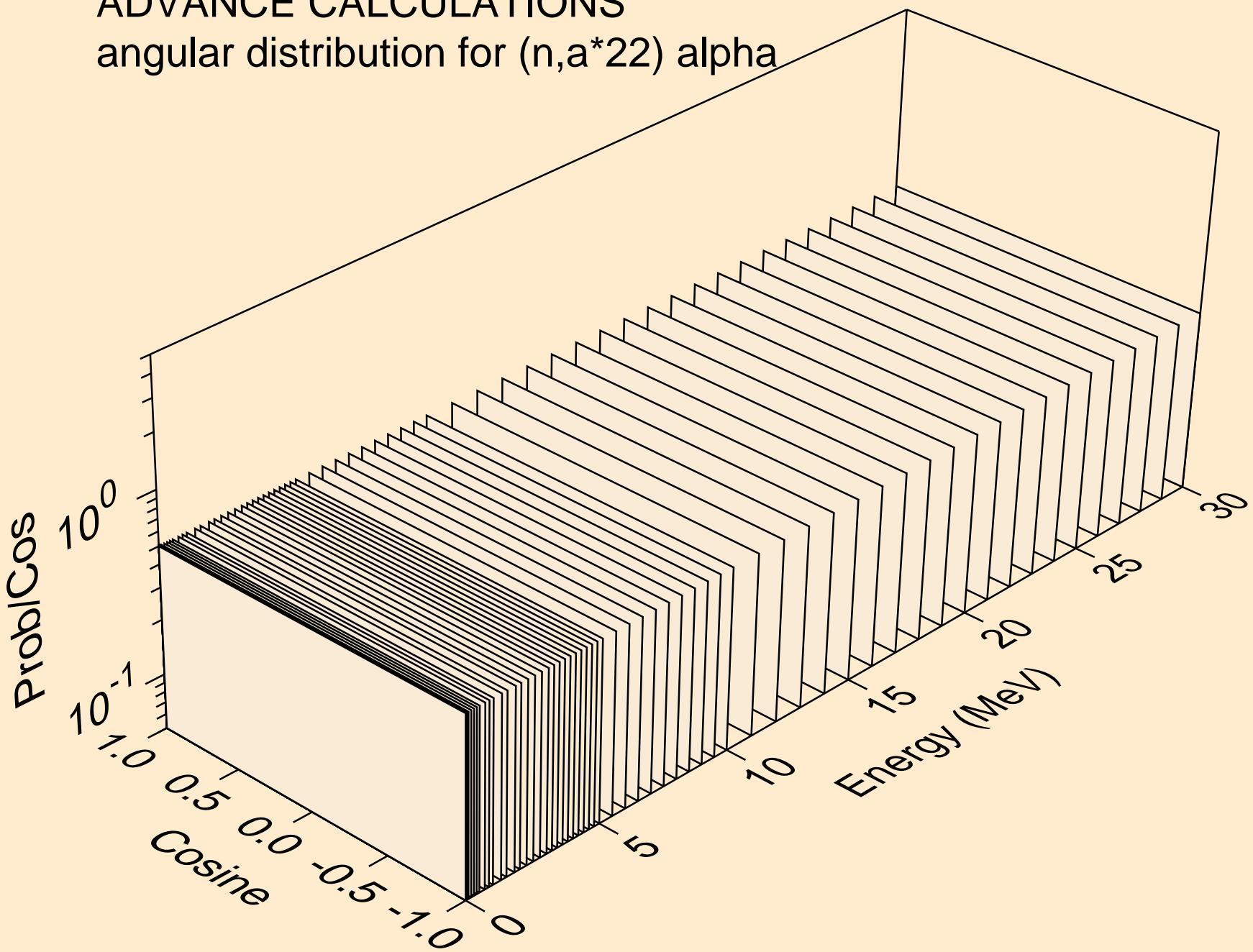
# ADVANCE CALCULATIONS

angular distribution for ( $n, a^* 21$ ) alpha



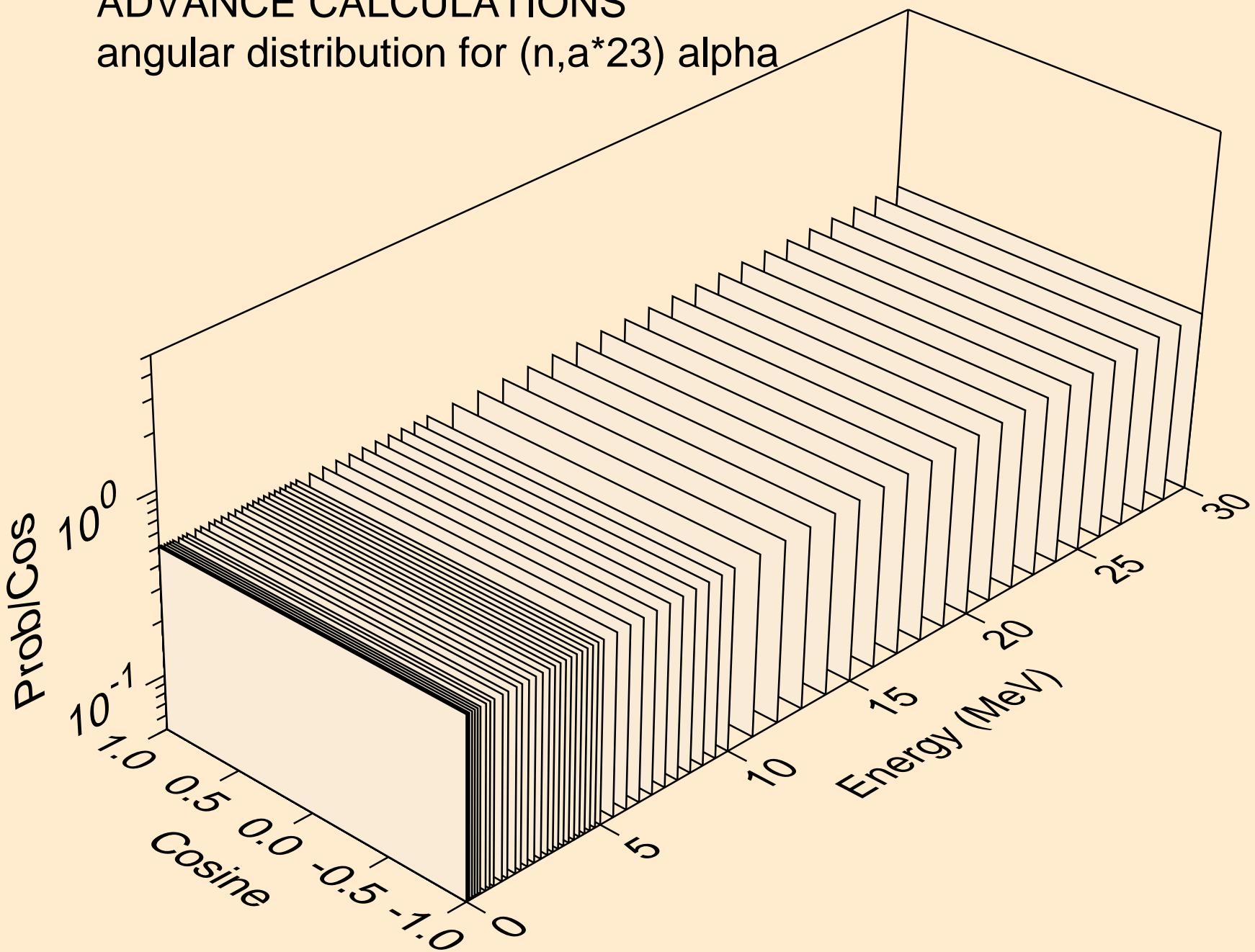
# ADVANCE CALCULATIONS

## angular distribution for ( $n, a^* 22$ ) alpha



# ADVANCE CALCULATIONS

angular distribution for  $(n,a^*23)$  alpha



# ADVANCE CALCULATIONS

alphas from  $(n,a^*c)$

